The OIL WEEKLY

A Journal for
Oil and Gas Producers and Field Men

HOUSTON
LOS ANGELES
PITTSBURGH
FT. WORTH
TULSA
CHICAGO

Vol. 34. No. 2 JULY 5, 1924 10 Cents Per Copy

It's a Wilson

Unquestionably!

Unquestionably the spring-latch construction embodied in Wilson Elevators represents the greatest advance in elevator engineering ever perfected!

Being a patented feature this gives to Wilson Elevators several exclusive advantages YOU absolutely need.

Ask For Catalog

Wilson & Willard Mfg. Co.
MANUFACTURERS

It's a Wilson

Distributed By WILSON OIL TOOLS CORPORATION

Factory and Distributors Office
2301 E. Vernon Ave.
Los Angeles, California. U.S.A.

Tulsa, Okla.
409 Atlas Life Bldg.

Houston, Texas
619 West Bldg.

TN860
.05

The Favorite ~ in Mexico!

FORTINE, PEARCE & HERB
DRILLING CONTRACTORS
WE GUARANTEE OUR WORK
TAMPICO, MEX.

Sept. 12th, 1921.

OIL WELL SUPPLY COMPANY OF MEXICO.
Apartado #331.
Tampico, Mexico.

Gentlemen:-

Referring to our recent conversation in regard to the 10" x 6-7/8" x 12" Mud Hog Pump which we purchased from you in April 1916, will say, that:

This has drilled 37 wells to the depth of 1600 feet to 1700 feet and is now drilling its 38th well and is handling the mud like a new pump. The upkeep is the way of new liners, pistons and valves has been less than any other make of pump we have ever seen or used. It is not only noted for its durability, but more so for its efficiency and speed in drilling.

It is un-necessary for us to say that we prefer the "OIL WELL MUD HOG", as the record speaks for itself.

Yours very truly
FORTINE, PEARCE & HERB
By

After 38 Wells

"OILWELL"
ESTD 1862
TRADE MARK
REGISTERED

KONE AND WILLIS S. EN C.

Oil Well Supply Co.
Apartado 331.
Tampico, Mexico.

Gentlemen:

In regard to the 10" x 6-7/8" x 12" Mud Hog Pump, mentioned in Messrs. Fortine, Pearce and Herb's letter to you dated September 12th, 1921 in which they advise that the pump was drilling its 38th. well since they purchased it from you in April 1916, will say:

That when we purchased the business of Messrs. Fortine, Pearce and Herb in September 1921, this pump was included in the outfits and upon checking our records, we find that this pump is now drilling its 30th. well since we got it.

It is hardly necessary to say that the Mud Hog is the favorite pump in the Oil fields of Mexico.

Yours very truly,
By
Kone and Willis S. en C.

After 29 More Wells

67 Wells ~ and still going strong.

This remarkable achievement of an "Oilwell" Mud Hog Pump has so sold the Mexican fields that today "Mud Hogs" are the favorites, as attested by the letters herewith.

8 years of continuous service,
67 wells drilled,
100,000 feet of hole,
still running like new on the 68th well.

What "Mud Hogs" have done for others, they will do for you.

Write for "Oilwell" Mud Hog Bulletins Nos. 43 and 46, or get copies at any of our 100 branches.

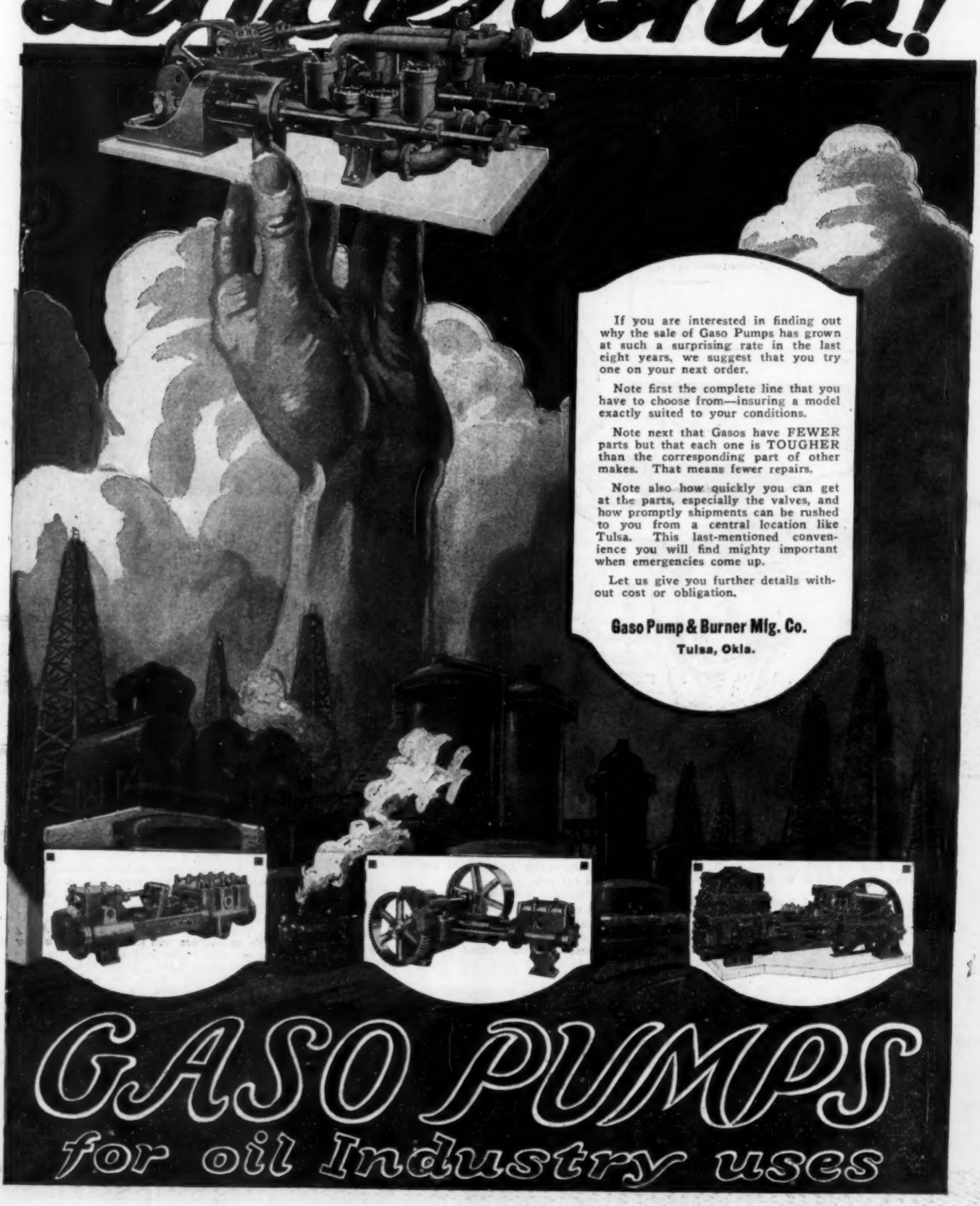
OILWELL SUPPLY CO

NEW YORK - LONDON - TAMPICO - PITTSBURGH, U.S.A. - SAN FRANCISCO - LOS ANGELES

World's Largest Manufacturers of Oil Field Equipment

THE OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

Leadership!



If you are interested in finding out why the sale of Gaso Pumps has grown at such a surprising rate in the last eight years, we suggest that you try one on your next order.

Note first the complete line that you have to choose from—insuring a model exactly suited to your conditions.

Note next that Gasos have FEWER parts but that each one is TOUGHER than the corresponding part of other makes. That means fewer repairs.

Note also how quickly you can get at the parts, especially the valves, and how promptly shipments can be rushed to you from a central location like Tulsa. This last-mentioned convenience you will find mighty important when emergencies come up.

Let us give you further details without cost or obligation.

Gaso Pump & Burner Mfg. Co.
Tulsa, Okla.

GASO PUMPS
for oil Industry uses

Say you saw it in The Oil Weekly

Montgomery Spring Casing Slip

Absolute Safety!

TABLE OF NOMINAL SIZES AND CAPACITIES OF MONTGOMERY HOOKS:

Size	Weight	Capacity
2¼"	350 lbs.	29,450
3"	500 lbs.	42,400
3½"	570 lbs.	57,726
4"	1,000 lbs.	75,396
4½"	1,100 lbs.	95,500
5"	1,750 lbs.	117,810
5½"	1,850 lbs.	142,548
6"	2,050 lbs.	169,644
6½"	2,100 lbs.	199,098
7"	2,400 lbs.	230,910
7½"	2,500 lbs.	265,074
8"	2,800 lbs.	301,590

Your Drillers—Don't they deserve this Protection?

Three drillers were KILLED last year in Texas and Oklahoma alone, because their employers failed to protect them with a casing hook that was SAFE in fact as well as in name.

Dozens were injured from the same cause—some of them so seriously that they will carry the marks to their dying day—all because a hook was provided that was not the SAFEST that engineering skill could produce.

Because we know that drilling is hazardous at best, and because we know that every operator is anxious to give his men the greatest possible amount of protection, we determined to produce, as a TIFOCO product, a SUPER-HOOK—a hook that was SAFE as well as efficient.

We decided to MACHINE all part after forging, in order to insure load suspension at theoretical center line, where the greatest load can be carried.

We decided on an oiling system that has proved a wonder—giving ample lubrication with practically no attention.

We decided to incorporate in one design (1) a double-swiveling spring hook; (2) a non-swiveling spring hook and (3) a non-rotating rigid hook.

We decided on an unfailing safety latch as an integral part of the hook, not an attachment.

We decided to make the factor of safety 10 TO 1 instead of 4 to 1 as in other hooks. A big difference—but then a human life can never be replaced.

Practice has more than proved the wisdom of special care in design and manufacture. Operator after operator is finding that the saving in casing threads alone more than pays for the Montgomery Hook. Most important of all, however, the operator who uses a Montgomery knows his conscience will never be troubled by the thought that a life lost or an injury sustained might have been prevented had a safe hook been provided. Note the table of sizes, etc., above. Then decide, for your own sake as well as your drillers' that your next hook will be a SAFE one—a Montgomery.

TITUSVILLE FORGE COMPANY

TITUSVILLE, PA.

TIFOCO products are handled in the Mid-Continent and Coastal Fields by the Continental Supply Co.; For export, by the Continental Well Supply Co., 2 Rector St., New York. Special Mid-Continent Representative: L. S. Allen, care Rex Machinery & Supply Co., Tulsa. Special Colorado and Wyoming Representative, L. E. Nebergall, 1375 Lincoln St., Denver.

A Vent Unit Equal to Any Emergency

Your Copy Is Ready

A new tank vent booklet, advance issue, describes fully the OCECO Emergency Safety Unit, also other OCECO Tank Vents with flow capacities. Tells how to apply OCECO Vent Standards.

Well illustrated with photographs of installations, cross-sectional drawings and charts. A thoroughly practical, helpful booklet. Send for your copy today—you will find the information of real value.

The Oceco Type C

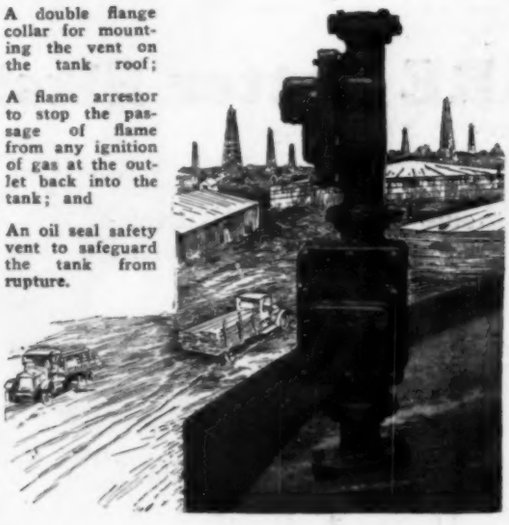
Emergency Safety Vent Unit

Consists of

A double flange collar for mounting the vent on the tank roof;

A flame arrestor to stop the passage of flame from any ignition of gas at the outlet back into the tank; and

An oil seal safety vent to safeguard the tank from rupture.



WHEN the emergency—a nearby burning tank or building—strikes, what then?

Your tanks of oil start suddenly to vaporize—huge clouds of it. Vent capacity is strained. (It's like the flood tearing at the river's dam which is sufficiently large and strong under all ordinary circumstances). Here is an emergency and it calls for emergency measures.

An Emergency Safety Vent Unit is the answer!

The OCECO (Type C) takes care of such emergencies. It also operates when the conservation valve might fail (because of faulty installation, maintenance, or other cause over which no one has any control and which applies to any conservation vent valve).

This safety vent is a dead unit until called upon to act. Used therein is a non-absorbing and non-freezing oil which will remain in perfect operating condition indefinitely and will not build up. In the side of the body are two sight glasses which at all times indicate to an inspector the level of the oil within.

It is absolutely fool-proof.

Although only recently put on the market, it has come into extensive use and has received the hearty endorsement of such oil companies as the Atlantic Oil Producing Company, Humble Pipe Line Company, Mexican Petroleum Corporation, Pure Oil Company, Sun Oil Company, and others. For some, it has demonstrated its value already by acting in cases of emergency and saving many times its comparatively small cost.

THE OIL CONSERVATION ENGINEERING CO.

Manufacturers of fire-prevention and evaporation-prevention equipment for tanks

Addison Road & N. Y. C. Tracks — **Cleveland, Ohio**

1158 Cunard Bldg. (25 Broadway) New York City
1454 Monadnock Building Chicago, Ill.
2024 Railway Exchange Building St. Louis, Mo.
220 Iowa Building Tulsa, Okla.
809 Texas Nat'l Bank Bldg. Ft. Worth, Tex.
306 O-S Building Casper, Wyo.

318 E. 12th Street, Los Angeles, Cal.
440 Howard St., San Francisco, Cal.
Beaumont Export & Import Co.
Perlstein Bldg., Beaumont, Tex.
Distributors
Gulf Coast Field and
Republic of Mexico

OCECO

Say you saw it in The Oil Weekly

700,000 Pounds

Out of 700,000 pounds of Banner Bits manufactured and sold by us in less than two years only one bit has been reported broken!

If one had the figures available on the number of feet drilled by this 700,000 pounds of Banner Bits, and the time saved through the quality and workmanship that go into them, it would represent the best sales argument that we could ever hope to offer.

Red Banner Bits ARE Better Bits!

"Just any old steel" doesn't make the kind of a bit that you can bet on when it is at the bottom of a several thousand dollar oil well investment. Banner Bits **are better** bits because the steel in them runs true to form and they are made by men who specialize in bit making.

If you'd like to know something more about Banner Bit performance, how they are actually saving money for the operators who are using them, write us today. We'll tell you!

Check our tonnage with other Bit manufacturers. It speaks for itself.

"GULFCO" Products can be had from stock at any of the stores of the

Petroleum Supply Company

Smackover, Ark. *El Dorado, Ark.* *Norphlet, Ark.* *Shreveport, La.*
Houston, Texas *Mexia, Texas* *Corsicana, Texas*

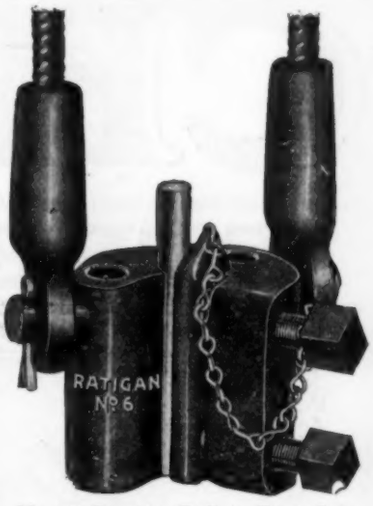
Gulf Coast Machine & Supply Co.
Beaumont, Texas

BUYING RATIGAN OIL WELL SPECIALTIES

Is Profitable

They give value beyond their cost

No. 2 Polish Rod Clamp



No. 6 Double Polish Rod Grip

A thorough knowledge of the problems of the oil industry and a corps of experts capable of working out such problems has resulted in making Ratigan Oil Well Specialties extremely practical and efficient.

Their speed and serviceability more than repay their original cost.

No. 2 Polish Rod Clamp: Can be applied faster and easier. Prevents injury to polished rods. By reversing block, clamps will grip rods, sand lines or cable.

No. 17 Safety Tubing Hook: Exceptionally sturdy construction. Has improved latch of simple design which permits operation with one hand. Capacity 175,000 lbs.

No. 3 Polish Rod Grip: Does not have to be taken from beam when in operation. Chain block is quickly swung out of place, allowing rods perfect freedom. Block can be reversed to hold cable, sand line or sucker rods. Hangs from beam with cable.

No. 6 Double Polish Rod Grips: Especially designed for deep, heavy wells. Keeps polish rods straight and free from bends and kinks. Will pump with rods or cable. Cable holes through grip allows double cable as safety feature.

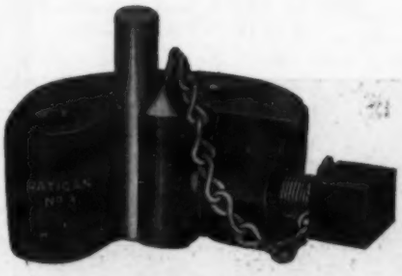
No. 1 Beam Hanger: Designed to hang the No. 3 and No. 6 Polish Rod Grips from the beam. Prolongs life of cable and protects beam. Impossible for cable to jump slot.

No. 16 Safety Sucker Rod Hook: Tested to 50,000 pounds with no evidence of strain. Has positive safety feature. Guided and operated with one hand.

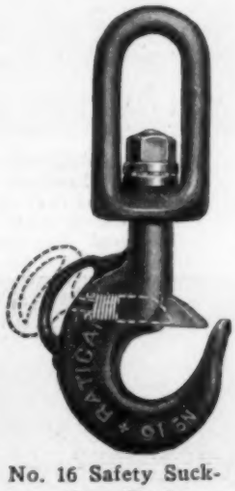
Write for the "Sure Grip" folder.

No. 17 Safety Tubing Hook

No. 1 Beam Hanger



No. 3 Polish Rod Grip



No. 16 Safety Sucker Rod Hook

J. P. RATIGAN

1213 Santa Fe Ave.,
Los Angeles, California

Mid-Continent Field:
Frick-Reid Supply Co.

Pacific Coast:
All Supply Houses

Say you saw it in The Oil Weekly

CHESTER

STEEL PIPE

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

In the Dodge-Syndicate Well, drilled by Lance & Younge at Huntington Beach, Calif., 4165 feet of 8¼"-36 lb., 8 thd. South Chester Steel Casing was successfully used.

Specializing In Casing

South Chester specializes on Casing for deep well drilling and records prove the value to the oil operator of such specialization.

Steel specially made for the oil country—that's the first factor—steel that resists crystallization to the limit—steel with higher tensile strength and greater elasticity — Chester Casing.

Our Distributors Carry a Complete Range of Stock

South Chester Tube Company
CHESTER, PENNA.

Also makers of Wrought Iron Casing 4½" to 12½" sizes

DISTRIBUTORS:

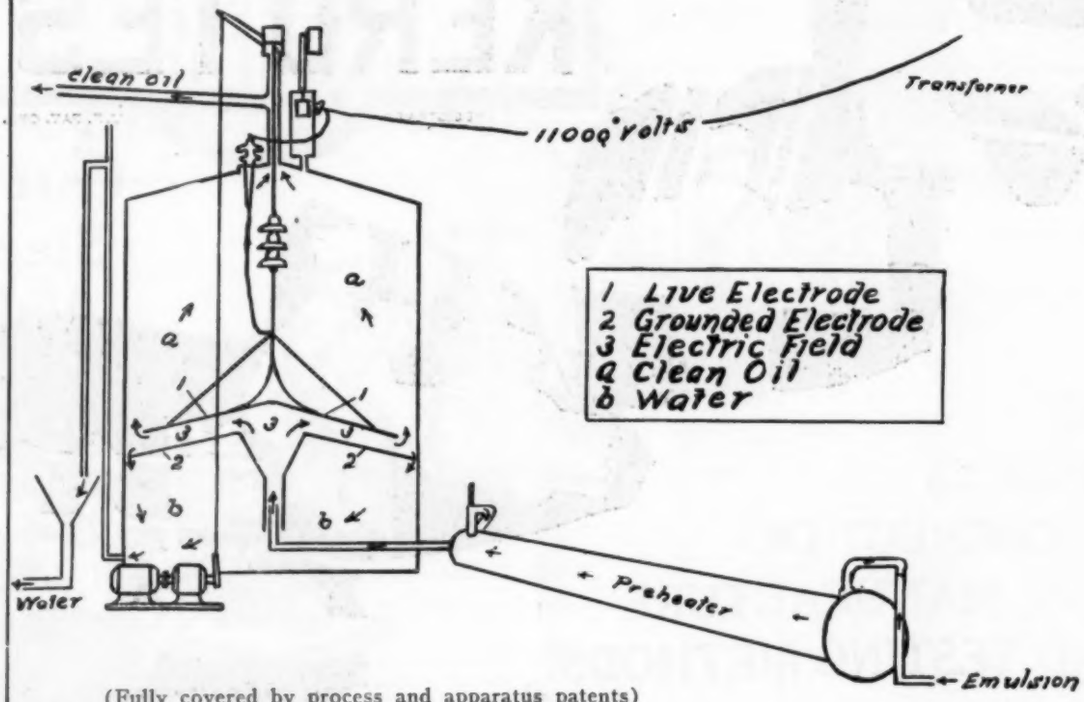
International Supply Co., Tulsa, Denver and Casper

Petroleum Supply Co., Houston, Texas

Prichard Supply Co., Mannington, W. Va.

South Chester Tube Co., District Office, Los Angeles, Cal. Stocks—Thenard, Taft.

Say you saw it in The Oil Weekly



(Fully covered by process and apparatus patents)

HOW IT'S DONE WITH "PR" ELECTRIC DEHYDRATERS

"P R" Electric Dehydraters consist essentially of the treater proper, which contains the electrodes; a settling tank; a means of supplying heat; and a source of high potential electric supply; together with the proper controlling devices.

After entering the treater, the crude oil flows through the space between a grounded metal electrode and the "live" electrode connected from the lead wire, or entrance bushing. While passing through this electric field the emulsion is broken up into separate parts of oil and water, the clean oil flowing out continuously through the top of the dehydrater, while the water is drawn off from the bottom and carries with it the salts and other impurities.

The Type "H F" Dehydrater possesses great flexibility; requires small space, is quickly installed; safe and simple to operate; has no fire hazard; is of high capacity; and is universal in application.

Present installations in various fields are handling emulsions ranging in gravity from 11° to 40° Beaume, having water contents as high as 85%; at costs of from one to three cents per barrel of net oil recovered.

Investigate now—it will pay you. The official oil doctors can solve your Cut Oil problems for you.

Petroleum Rectifying Company of California

308 UNION OIL BLDG. LOS ANGELES, CALIFORNIA

Branch: 336 Humble Bldg., Houston, Texas

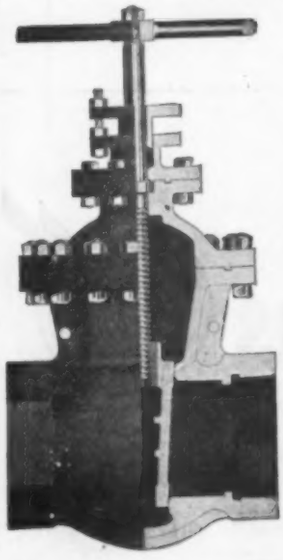
Say you saw it in The Oil Weekly

KEROTEST

REGISTERED U.S. PAT. OFF.

Cast Steel Valves

THE RESULTS OF CORRECT DESIGN, MANUFACTURE AND TESTING METHODS



The first heavy duty Valve for Oil Country Service that has really won the respect of practical oil field operators.

Its light weight, making for cheaper and easier transportation and handling, its concealed seats, its high quality cast-steel construction and the severe 24-hour kerosene test to which it is subjected, make it the logical equipment for every oil well and pipe line.

KEROTEST VALVES are made in all casing and pipe sizes, flanged or screwed ends, rising or non-rising stems for every oil field service.

The KEROTEST Catalog gives all the facts.

Pittsburgh Reinforced Brazing and Machine Company

PITTSBURGH, PENNSYLVANIA

Carried in Stock and Sold by

NORVELL-WILDER HARDWARE CO.,

Houston Beaumont Shreveport

GRINNELL COMPANY OF THE PACIFIC,

Los Angeles San Francisco

Export Distributors:

OIL WELL SUPPLY COMPANY,

Pittsburgh

New York Tampico London

For the Sake of the Future as Well as the Present---

Cement Cable-Tool Casings

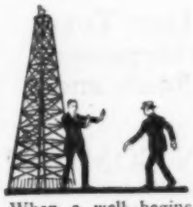
WHEN an operator comes up to you and says,

"It looks as if well No. so-and-so is about through—production's falling off and she's showing an increasing amuont of water,"

—you're probably hearing a statement that you've heard time and time again. Have you ever stopped to consider, however, that possibly some of these wells are coming to an end years before their time—that possibly, if they had been properly COMPLETED, they would still be profitable producers for years to come?

The Price of False "Economy"

When a well is completed, you know, and proves to be a profitable producer, with little or no water trouble, it is only natural to conclude that it is a success. A comparatively small amount invested in absolute security—such as that entailed by scientific oil well cementing—is regarded as unnecessary.

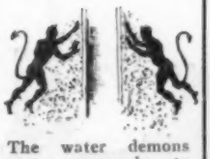


When a well begins to produce, further precautions are dismissed as unnecessary.

But the ULTIMATE PRODUCTION of a well is not governed by the production of the first six months. Eventually the price of false economy is paid—in the form of lessened production, cut oil and an untimely end of operations.

Exit the Oil; Enter the Water

Everybody knows that newly touched sand rich in oil will resist a small amount of water AT FIRST. But as the oil begins to leave the sand, water, ever-ready, begins to trickle in—around the shoe, through corroded casing and in other ways. Having a greater surface tension than oil, it clings stubbornly to the interstices, doing its worst to retard the flow. Production falls off, water troubles begin, and the operator wonders why—without realizing that the reason dates back to the time the well was drilled, when a comparatively small amount invested to safeguard the big investment would have given numerous advantages at once and years of extra production later.



The water demons are ever-ready to break in

Scientific Oil Well Cementing is an insurance policy covering real hazards.

Doesn't it stand to reason that an investment in drilling ranging from $15,000 upward deserves the one bit of added protection that guards it against the most serious hazards that can befall a well. With so much at stake, does it pay to take the chance of shifting formations, of frequent collapse and corrosion of casing—with the heavy expense of pulling; or damage when "shooting," of an insecure seat? Does it pay to take the chance of having water, unnoticed at first, come into the sand, slow up production, produce other well known troubles and eventually close the well years before its time?

The Halliburton mixer mixes 100 sacks of cement in 6 minutes

Why Halliburton Leads

The Halliburton method of scientific oil well cementing is recognized as the leading method because the protection it gives is so certain and absolute. Oil well cementing must be extra-speedy—the Halliburton mixer mixes 100 sacks of cement every 6 minutes. In oil well cementing it is important to know at all times the exact location of the column of cement in the hole—the patented Halliburton measuring line is the only sure method of getting this information. The Perkins process known as the "two-plug process" but covering also the use of one plug, has long been known as the most advanced method ever devised. Halliburton controls it in the Mid-Continent. Four thousand successfully cemented Halliburton wells attest the success of the Halliburton method of scientific oil well cementing.

Five Reasons to Write Us

Sound reasons, all of these, why, if you wish to give your investment in drilling the protection it demands, it will pay you to get in touch with us.

Erle P. Halliburton

Recognized Leader in Scientific Oil Well Cementing

Duncan, Oklahoma

READING PIPE

GENUINE WROUGHT IRON

The straightening of READING Tubing

OIL FIELD requirements have made straight tubing an absolute necessity. Reading has adopted a machine to insure such straightness.

READING TUBING is drawn through two parallel sets of concave rolls, the bearing surfaces of which form an alignment of absolute straightness. This action is positive and the most effective method yet devised for securing the maximum degree of straightness.

Not only is READING GENUINE WROUGHT IRON TUBING superior to steel, but READING TUBING surpasses tubing of any other manufacture in finish and workmanship.

READING IRON COMPANY
READING, PA.
World's Largest Makers of Genuine Wrought Iron Pipe
OIL WELL SUPPLY CO., Distributors
Inquire at any of the 100 branches

Out of every 100,000 feet

of Sucker Rods going into Santa Fe Springs

Axelson

furnishes in excess of

93,500

There Must be a Mighty Good Reason

Axelson Machine Company

General Offices and Western Factory: Los Angeles, Cal.
Eastern Sucker Rod Factory—St. Louis, Mo. Mid-Continent Branch Office—1023 Kennedy Bldg., Tulsa, Okla. Mid-Continent Sales Representatives and Distributors—Frick Reid Supply Co. Casper, Wyoming Office—With Frick-Reid Supply Co.
New York City Office—30 Church Street

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

Copyright 1924 Axelson Machine Company

Day and Night Service

There's a Republic Supply Store near your well, ready to supply you at any hour of the day or night, with oil field equipment of known dependability, such as

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

Jones' Acme Sucker Rods.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes Special Milling Cutters.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

Jones' Acme Gas Engines.

DISTRICT HEADQUARTERS AND STORES AT

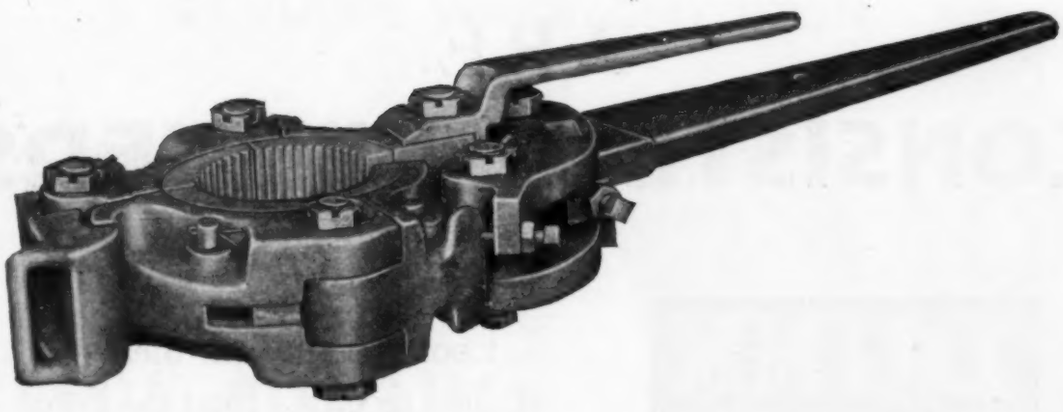
HOUSTON, TEXAS
Corsicana, Texas
(Mildred)
SHREVEPORT, LA.
El Dorado, Ark.
Smackover, Ark.

WICHITA FALLS, TEXAS
Graham, Texas
Breckenridge, Texas
Electra, Texas
Burkburnett, Texas
Wilson, Okla.
Duncan, Okla.

TULSA, OKLAHOMA
Tonkawa, Okla.
Henryetta, Okla.
Yale, Okla.
Shidler, Okla.
Haskell, Okla.
Beggs, Okla.
Slick, Okla.
Bristow, Okla.
Wewoka, Okla.
Hominy, Okla.
Okemah, Okla.

Republic Supply Company

The Verdict



"The Best Tong I Ever Used"

This is the verdict of the Roughnecks, Drillers and Contractors on every job where the New Eureka is doing all the Tonging.

Get Prices and Literature on the

New Eureka Tongs

Mfg. By

LeBUS ROTARY TOOL WORKS

Electra, Texas, U. S. A.

Say you saw it in The Oil Weekly

DUNN TONGS

ARE CONSISTENT WINNERS

Look up any of these fast drilling records. Find the list of tools used. See what kind of tongs helped make the record.

It's just bound to be

DUNN

carried in stock by

NATIONAL SUPPLY COMPANIES

Type "CX"

BYERS PIPE

GENUINE WROUGHT IRON

—and now *for* Better Tubing

CORROSION and crystallization are the two arch enemies of tubing. Tubing failures are costing operators millions of dollars annually. Every operator readily recognizes the fact that any reasonable price paid in order to get longer lasting tubing is a good investment. Railroad companies from long experience in operation of rolling stock have found that no metal resists rust and constant vibration so long and so successfully as genuine wrought iron. Observant oil operators are gradually finding the same to be true as regards wrought iron tubing.

The fibrous metal of Byers wrought iron resembles a wire cable in toughness. Its incorporation of siliceous slag protects it against rust and crystallization. This slag incorporation is entirely absent in ordinary "wrought" pipe. Byers tubing is guaranteed to be made of genuine wrought iron, of the highest quality.

Ask for further information

A. M. BYERS COMPANY, Pittsburgh, Pa.

Established 1864

Representatives:

S. D. OLIPHANT, Tulsa, Okla.

E. A. SMALL, Jr.
1614 Second National Bank Building
Houston, Texas

J. A. ARMSTRONG, Los Angeles, Calif.

Distributors in all Jobbing Centers

Tubing • Casing • Drill Pipe • Line Pipe

From the first to the Last Word in Derricks

ABOVE—Reproduction from the original Drake Well of 1859 near Titusville, Pa.

IN THE DAYS of stage coach and covered wagon, Drake drilled the first well in 1859 with the original wooden derrick.

In recent years International perfected the "IDECO" Galvanized Structural Steel Derrick—the greatest boom to the Oil Operator since Oil was discovered.

Gone is the danger of pulling in the derrick. Gone is the possibility of destruction by wind storm or fire. Beyond anything else is the elimination of great replacement and repairing expense and attendant loss of production—the real eater of profits.

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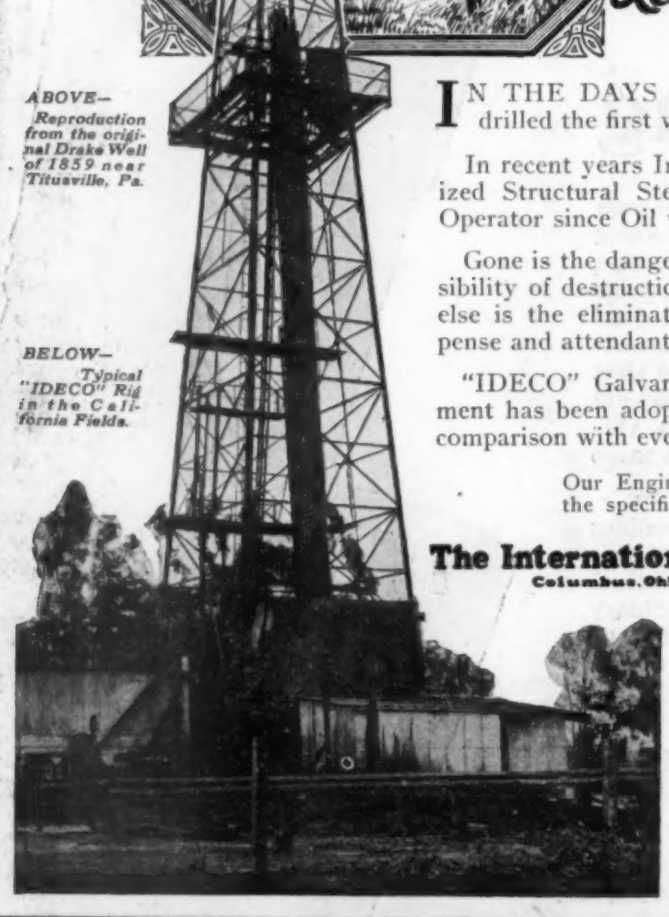

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Tell the World

While men of vision of the petroleum industry are considering a national educational campaign in behalf of their business, it may be as well to offer a word of caution along with a bit of sanction.

That every division of the oil business would profit through enlightenment of the general public is undeniable. Ignorance of the oil industry has worked to its harm, just as ignorance has worked harm on every movement or industry of the world. It is a matter of record that education of the public is possible.

Not a score of years ago, the railroads of America stood in disrepute generally. More recently, the public utility corporations were subjects of scorn. Both have fair standing over the United States at present and education has been responsible for it. By several methods men and women have been given true pictures of the railroads and the public utilities. These men and women not only feel kindly to these corporations but also own thousands of shares of stock in them.

So it may be accepted as a fact that the petroleum industry can take its case before the bar of common sense and see its rating changed in public esteem.

This brings the question of how it shall be accomplished and here is where the word of caution seems fitting.

The first thought is of advertising. Advertising undoubtedly is the most potent force of the business world. For building sales and creating good will, advertising has no equal. Advertising can serve the petroleum industry in its effort to gain a higher public rating.

But advertising, with all its possibilities, has witnessed the wasting of millions of dollars to no good. Spending money for space in publications and on poster boards is not necessarily advertising. To be effective advertising must carry the proper message to the proper person.

This thing of educating the public on the merits of the oil industry belongs to experts in advertising. Long study should come before the effort becomes public. It is not possible to state just what the proper message is.

It can be stated, however, that the message should be one of facts. One stain on the petroleum industry has been the promotion of illegal companies. While the real oil industry had no part in this, the stain remains with the public because of ignorance. It would seem an excellent effort for education to be put to work to inform the public of the methods of the real oil industry.

Facts will do it. The fact that the oil industry works at profit margins comparable with those of steel and lumber should be a revelation to men, who have squandered thousands under the false impression of fabulous wealth from a single oil well. That fact might prevent thousands of other men from wasting money in oil.

Recently legislative bodies have turned to the oil industry with many taxation schemes. There is no doubt that the oil industry is bearing an unjust share of the taxation burden of several states.

It is an economic axiom that the person, who finally consumes a commodity, pays every tax levied against it from production, through manufacture and distribution. So taxes voted against the oil industry have finally come from the pockets of those using gasoline.

That is a fact, which might bear fruit, were it presented in appealing style to the man using gasoline. The demagogue howls against the oil industry and his constituents applaud through ignorance. If they understood they might jeer rather than cheer.

Now the proper person. Certainly the oil industry does not need to take its message to itself. Those of the oil industry know something of its struggles and its place. Outside of the oil industry, the field for an audience is unlimited.

It will require long study by experts to complete the proper education effort. Whatever comes of the movement, the proper message should be taken to the proper public.

This copy of The OIL WEEKLY is a part of a year's subscription sent you with the compliments of the Hughes Tool Company, manufacturers of rock bits and tool joints, Houston, Texas, and Los Angeles, California.

Proration Confronts Producers Again

Present conditions so similar to 1923 that its lessons may be studied with profit

By Grady Triplett

FACED by conditions similar to those existing in June of last year, the major purchasers of Mid-Continent crude oil adopted proration as part of their buying plan early this week. Monday the Sinclair Crude Oil Purchasing Company announced that it would take half the oil from its present connections, storing the other half for the account of the producer.

The Prairie Pipe Line Company followed with a 50 per cent proration policy. That proration will spread is certain. How long it will last depends on several controlling factors, one of which is the action of the producer.

It was June 26 of 1923 that proration was begun. Between then and mid-November the crude oil situation in the Mid-Continent area was one of jumble and uncertainty. Price reductions finally came when proration failed to check production. The posted price of oil of 28 degrees Baume and below went to 50 cents September 5, while oil of 41 gravity and above was posted at $1.80. But these posted prices meant little so far as returns from production were concerned, for only part of the oil from a lease brought those prices. Much of the remainder went to independent refiners at prices still lower. The crude oil price structure reached a condition in which the independent refiner bought his crude at his own price.

Situation Year Ago

Those concerns buying on proration came to a time when they could take less than half the oil from the leases where they had connections, as they were buying, in most instances, to meet their current deliveries only.

It was early in October that two concerns removed proration in North Texas. November 13 all buyers abandoned proration for this district and agreed to take the oil then held for producers from the proration period. Following this, proration gradually passed from other parts of the Mid-Continent area.

By this time the price structure had become somewhat stable, but quotations were decidedly lower than when proration became effective. Mid-Continent prices of June 26, 1923, ran from $1.10 for oil of 28 degrees or lower to $2.20 for oil of 41 degrees or higher. Prices prevailing when proration had run its course were 75 cents for oil of 33 degrees or lower, with $1.25 for oil of 40 degrees or higher, as the other extreme.

During the proration period the posted price structure had been up and down over an uneven range. Even the major purchasers often were not uniform in quotations. Independent buyers made offers according to their needs. It was really a period in which crude oil in the Mid-Continent fields was not wanted. It was turned from door to door until it found outlet almost by accident.

Overproduction brought proration in 1923. Many reasons have been advanced for the adoption of the method of buying. Whatever the explanation, the truth is that buyers of crude oil came to a time when they could not use all the oil offered them. So they adopted proration to prevent acceptance of surplus oil.

Repetition or Not?

While conditions preceding the present proration are not identical with those of 1923, the two periods bear such similarity that the oil producer can look back on 1923 with profit. The present period may be a repetition of 1923 for the Mid-Continent oil producer. If it is not, the difference will result from the action the oil producer takes to prevent a repetition of the disastrous period of last year.

For several weeks preceding the proration order in 1923 efforts had been made to hold back production. These efforts bore no fruit. Production continued to climb in Oklahoma, while in Texas the Powell field was a threat, which finally became a disturbing factor in the tangle the oil situation reached.

This condition was duplicated this year. During June efforts were made to halt drilling and production in the new Cromwell pool of Seminole County, Oklahoma. Seven meetings in two weeks failed to bring a decision. Although this pool had but 22 concerns and individuals producing oil, it was impossible to get all represented at the seventh meeting.

Announcement of proration came shortly after the seventh failure to reach a restricted development program for the Cromwell pool. By this it must not be accepted that this one pool is responsible for proration. The Burbank pool continues to be such a factor in oil output that it looms large when "overproduction" is mentioned.

Behind the present proration program is the fact that the several fields of the Mid-Continent area are furnishing more oil than the buying concerns can market. This is a fact despite a consumption record in advance of last year, in spite of decreased imports and increasing exports.

But where the crude oil situation of 1923 had California with a rising production, the output of that state is now on the down grade. In 1923 Powell was just hitting its stride when proration came. Its production passed 300,000 barrels daily before proration was over. Texas does not have another Powell field in prospect today. But this may be discounted by what Cromwell can do in Oklahoma.

California Reversed

California in June of 1923 was producing 631,000 barrels of oil daily. Its production now is around 630,000 barrels daily and declining, while in 1923 it was on the upgrade. Many authorities do not give much consideration to the part California crude has played in wrecking Mid-Continent crude prices. Whatever its effect, it is now diminishing, while last year it was increasing.

The effect of proration of purchases at present will be determined largely by the attitude of the producer. If he accepts it as a fact and takes steps to protect himself from it, its duration can be short. If he lets proration run its course the experience of 1923 may be duplicated. In 1923 proration and lower prices finally drove production downward, but observation seemed to leave the conviction that proration did its work despite the producer instead of with him.

That the Mid-Continent oil producer gave little heed to proration when it first hit in 1923 is indicated by production figures. The daily average for the Mid-Continent continued to climb for a few weeks after buyers announced restricted buying. Mid-Continent daily output was 837,980 barrels when proration was adopted in 1923. It passed below that figure for the first time after that date for the week ending August 11, with 819,818 barrels. Between that date and June 26 Mid-Continent output had been as high as 923,450 barrels daily.

After the middle of August Mid-Continent output gradually dropped until Powell brought it back up in October and November. By that time other fields of the Mid-Continent were far below their June levels, so they

(Continued on page 28.)

The OIL WEEKLY is pleased to be in a position to announce to our readers this week that Mr. Grady Triplett has returned to our organization after several months of special feature writing for a number of magazines and will again write exclusively for this publication.

Mr. Triplett is well known to The OIL WEEKLY readers, having represented us at different times in North Texas, Louisiana, Arkansas and Oklahoma. This wide contact has given him an insight into conditions as they exist in the fields of those sections and adds materially to the value of his interpretations of the happenings in those quarters from to time.

His addition to the staff as a special writer who will make periodical investigations of points of interest adds greatly to our service and is in keeping with our determination to give The OIL WEEKLY readers full and accurate information on oil production in all its phases.—The Editor.

Panoramic view of the town of Craig, Colorado, the rail head for oil field equipment and supplies as well as operators destined for the new Moffat pool in Moffat County.

Production Maintained Level During June

Despite rumors of pending price cuts crude oil production continues at average of 2,000,000 barrels per day

IN spite of crude cuts in the Mid-Continent and Eastern sections along with persistent rumors of proration and actual curtailment of runs in a few instances, production for the entire United States held its own during June. In fact, if we compute the output of all fields on a 31-day basis instead of a 30-day one we find an increase of approximately 320,000 barrels of crude as compared with May. Total production for June is reported at 58,894,355 barrels. May showed 60,575,463 barrels, but it should be remembered that May has 31 days and that the report for June covers 30 days only.

Production for all fields at this time is approximately 2,000,000 barrels of crude daily. If we add this amount to the output for June we get an increase, which is really the situation.

Drilling Statistics Off

Drilling statistics, on the other hand, show a material falling off for the month just past. In a number of districts the total number of wells completed during June was hardly half the number reported for May. Of all states producing oil Illinois, Indiana and Pennsylvania were the only ones showing increases in the number of wells brought in for the month. Texas led all states in the number of wells completed with a total of 450. Oklahoma came next with 391 completions, and Arkansas took third place with 178.

Taking the country as a whole and adding production for one day in order to give a basis of comparison with May, decreases were shown in California, Arkansas and Eastern States. All other districts showed increases in total output.

The slump in California is due to the rapid decline in the Los Angeles Basin. Activity in the Smackover field in Arkansas has been reduced during June, and Eastern States have suffered crude cuts which have probably had a slight effect in cutting down development work. It must be remembered, however, that production from Eastern fields is not of the character to influence greatly the output of the country, and a let-up in drilling activity in Eastern fields does not show directly in the amount of oil produced as is the case in other sections of the country. This is due to the fact that the rate of decline in wells in fields beyond the Mississippi River is much slower than in other fields.

Oklahoma reported the biggest increase of any one state during June, with an increase of approximately 450,000 barrels as compared with May. However, the state as a whole is beginning to show the effects of shut down talk. Little wildcatting is going on and there is noticeable a decrease in the number of new locations announced.

Louisiana showed an increase of approximately 200,000 barrels, due to flush production from Cotton Valley.

In Texas, June proved a turning point for the north and west sections of the state. Noticeable declines were reported from these districts, due principally to the heavy accumulations of crude and refined products, with increased production, as well as to the fact that independent crude buyers limited their daily purchases of oil and refused to connect with new wells.

Texas Fields S'ump

Archer County fell below the peak reached in May. The decrease was attributed to curtailment of field operations on account of action of the independent buyers.

The Powell district slumped more than 3,000,000 barrels during June, and Mexia showed decreases on account of the storm which destroyed a large number of derricks during the last of May. Many wells were thus put off production and have not been brought back at this time.

Gulf Coast sections showed little variation in the amount of crude recovered during the month, but there was a slight decline in the number of wells completed.

Texas miscellaneous fields, which include Luling, Mirando, Somerset and Rockdale-Minerva, showed a marked increase over May, due to the increased flush production in the Luling district, Caldwell County.

Oklahoma

The effects of the shut-down plans in the state of Oklahoma which have been the topic of conversation during the month of June, are best evidenced by the number of completions turned in for that month. The total number of wells completed was less than during the previous month. Although in every instance, the proposed plans failed in their purpose, the psychological effect of efforts to curtail production has been far reaching. The wildcatter of the state has ceased to operate to a great extent while the number of new locations even in proven territory seems to have reached a minimum.

Burbank contributed more initial production than did any other Oklahoma area during the month, adding 29,268 barrels from 115 successful completions. Creek County and Seminole each came in for an amount about half the Burbank figure. The 13,697 barrels of initial production reported from Creek County comes, in the major part, from the extension of the Stroud field, while the Seminole County recovery has been added by the Cromwell pool.

In the Osage County fields, which excludes Burbank, the number of completions is far under the number turned in for the month of May, there being only 42 in the month just passed, compared to 100 in May. The initial production of Osage County fields in June amounts to 8755 barrels, while May added 30,818 barrels.

Oklahoma operators recovered 13,685,610 barrels of crude oil from the different fields of the state in June,

thus showing a gain of 459,861 barrels over May. Cromwell produced 603,120 barrels and Stroud added 684,960 barrels to the total of the state during the month, while the producing ace, Burbank, produced 2,692,4-0 barrels, a figure approximately 200,000 barrels under the total recovery for May. The Tonkawa field also shows a loss under the previous month, in spite of the fact that two deep sand wells are producing approximately 5,000 barrels a day.

Kansas

A total of 70 completions is recorded from the state of Kansas during the month of June. Of this number there were 38 producers, 11 gas wells and 21 failures. Initial production recovered from the 38 successful completions is given as 5258 barrels, a figure about one-third of the amount added during May.

With five producers added in Cowley County by the Waite Phillips-Alcorn Oil-Independent group the county led all others in reporting new production, with a total recovery of 2543 barrels from the wells in the Rainbow Bend field. Greenwood County takes second place for the first time this year with 23 producers adding 2360 barrels as initial production.

The total recovery of crude oil during the month of June is given as 2,225,-400 barrels, an increase over the previous month of 32,509 barrels. Greenwood County leads all other areas in monthly production by contributing 537,510 barrels to the total output of the state.

North and West Texas

June proved to be the turning point in the trend of both production and drilling activity in the major producing areas in the North and Central West Texas district, and noticeable declines were registered for the first time this year. This reversal of the trend of operations in the district is largely due to recent heavy accumulation of crude and refined products in the face of increased production, and was forced upon the operators by major pipe line companies and independent crude buyers limiting their daily purchases as well as refusing to connect with new wells to buy the oil. Two crude price cuts made by Magnolia Petroleum Company on May 10 and June 6, and later followed by most of the independent refiners in the district, was accepted as a warning by the operators to hold unnecessary drilling in check.

Archer County repeated its feat of producing more than 1,000,000 barrels of high gravity crude within a month's period for the second time in its history, but its totals for June were off about 35,370 barrels as compared with the peak level established in May. The various pools in this county sustained an appreciable decline in June as a result of the forced curtailment of field operations, and only 8559 barrels of new production from 146 completions were reported, as compared with 19,152 barrels of new production from 188 completions during May. Field operations in this county reached their peak level on May 10 with a total of 214 tests listed, and towards the close of June only 132 operations were being carried on the drilling reports for the county. During June new producing areas were uncovered in the county by Brader et al Farmer well; The Texas Company's Graham-Pease test; Knight and Hines' W. J. Ragle 1; and Hobbs et al's W. Wright well, but pipe line connections have not been given any of these wildcat producers, and nearby developments have been held up pending a better crude market.

Wichita County's activity continues to be confined to the south half of the county near the Wichita river, and between the Electra and K-M-A fields and south of Fowlkes Station and Iowa Park. No important extensions were made during June, but new wells added indicate that considerable acreage bearing flush production remains to be developed.

Eastland-Stephens

Eastland and Stephens Counties reported fewer completions during June, and also registered a slight decline in monthly production. Activity in the former county is largely confined to the development of the shallow sands passed up during the boom days. The big play launched about six weeks ago for the 3900-foot pay in the Breckenridge-Curry district of Stephens County after Magnolia's Brown 4 blew in with an initial flow of 750 barrels with ten million gas at 3980 feet, is not proving successful and dry holes offsetting this deep well on the west and north were completed during June.

Texas Wildcats

Important wildcat developments occurred during June in the Panhandle section of the state; Montague County section of North Texas, and Reagan County section of West Texas. In the Panhandle, the oil producing area in the Carson-Hutchinson County field was extended one mile to the east by The Texas Company's S. B. Burnett 3, while the Wilcox Oil and Gas Company's wildcat test in Gray County is showing for a commercial producer from sandy-lime pay at 2841 feet with good gas pressure. Montague County scored its first oil well during June when the Boyd Oil Company's Mrs. Salmon 1 tested 65 barrels daily at 902 feet, resulting in four new wildcats being started in the county. Reagan County broke into the flush production class on June 20 when the Big Lake Oil Company's University 9 extended the field slightly to the east with an initial flow of more than 50 barrels per hour from sandy-lime pay at 2982 feet, and later increased to 59 barrels per hour when the tools were pulled.

Richland and Mexia

The steady decline in production of the Corsicana-Powell field is being partially offset by new production coming from the Richland pool, located to the south, but this latter area is not expected to become a disturber in the East Central Texas district crude market, as its producing limits have been defined to the north, east and west. During June the Corsicana-Powell field slumped below three million barrels in monthly production for the first time since last February, and fell off about 400,000 barrels as compared with the total production reported for May. Along with this heavy decline the Mexia district also came forward with a sharp drop due to the loss of about 250 wooden derricks in the field during a violent storm in May, resulting in pumping wells being off production for several weeks. The Pure Oil Company, which is the largest producer at Mexia, lost about 115 derricks during the storm, and has not restored all of its wells to production, and is reported to have sustained a loss in excess of $2,000,000 as result of the equipment damage, loss of oil production during the shut down period and failure of the wells to come back to their original production.

The Richland pool has about 25 com-

(Continued on page 31.)

JUNE U. S. PRODUCTION

Following is the gross estimated production of crude oil in the United States for the month of June as compiled by The OIL WEEKLY:

California	18,898,860
Texas	11,482,785
Oklahoma	13,685,610
Mountain States	3,809,250
Arkansas	3,744,440
Eastern States	3,172,500
Kansas	2,225,400
Louisiana	1,875,510
Total	58,894,355
May	60,575,463

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all states in the Union with the exception of the Mountain States and California:

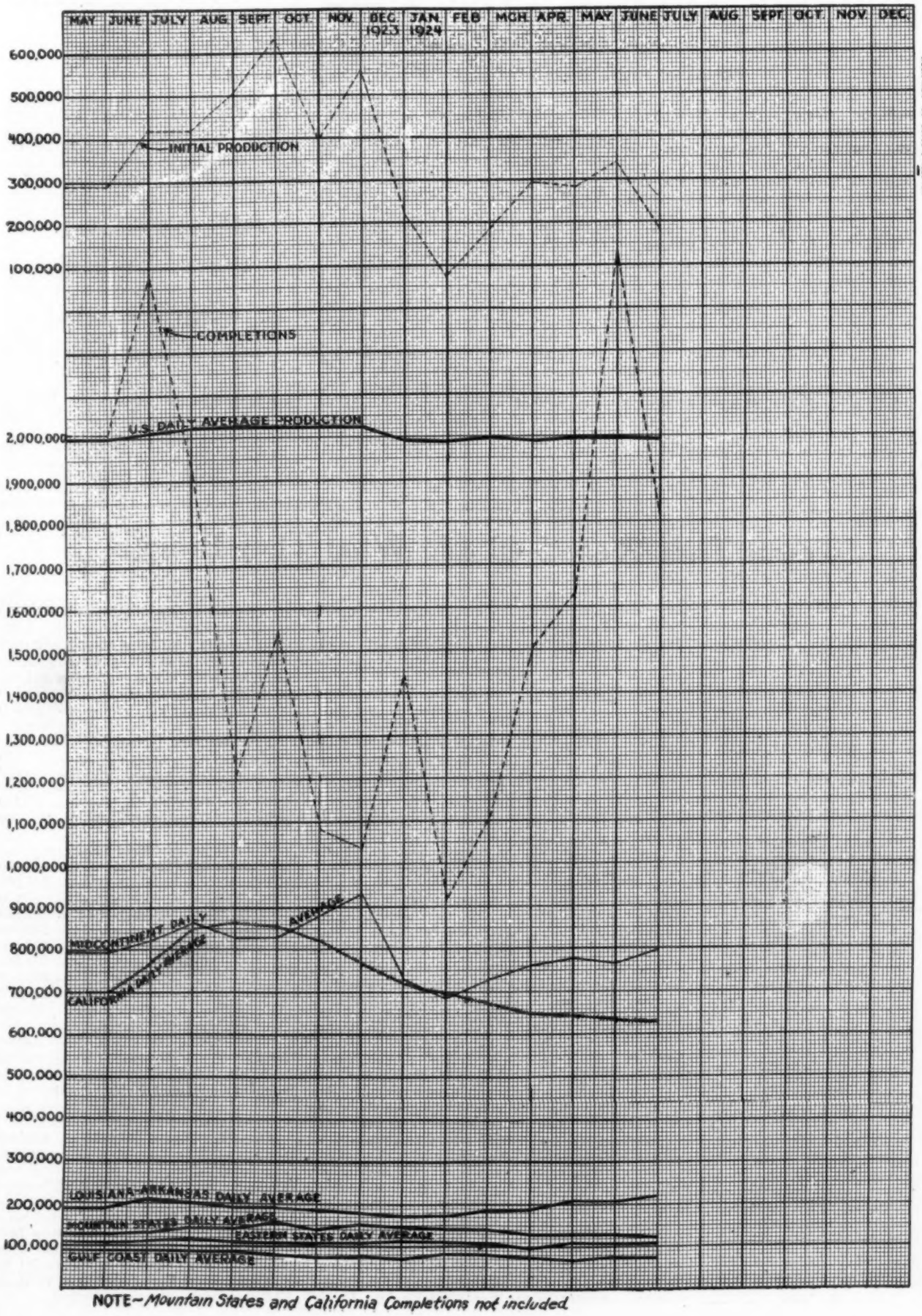
Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
July	1,919	1,256	172	511	420,546
August	1,210	939	189	364	506,815
September	1,546	990	292	264	631,453
October	1,078	633	181	264	396,135
November	1,038	760	25	253	562,231
December	1,447	1,032	50	355	224,794
January, 1924.	926	554	153	219	71,781
February	1,105	798	40	267	183,204
March	1,510	948	211	351	293,772
April	1,634	1,084	187	363	280,160
May	2,431	1,605	273	553	343,531
June	1,808	1,215	193	400	182,750

UNITED STATES FIELD STATISTICS

Following are the completions, showing producers, gas wells, failures and initial production of crude by states, except California and Mountain States for the month of June as compiled by The OIL WEEKLY:

States—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Oklahoma	391	286	17	88	89,098
Kansas	70	38	11	21	5,258
Kentucky	159	118	2	39	3,722
Mississippi	..	..	..	..	.....
New York	36	33	..	3	122
Ohio	165	100	27	38	1,647
Pennsylvania	139	104	26	9	540
Tennessee	..	..	..	..	.....
W. Virginia	135	32	79	24	255
Louisiana	44	18	18	8	13,118
Illinois	25	19	..	6	1,161
Indiana	16	8	2	6	144
Arkansas	178	159	8	11	40,235
Texas	450	300	3	147	27,450
Totals	1,808	1,215	193	400	182,750

U. S. PRODUCTION AND FIELD STATISTICS



NOTE—*Mountain States and California Completions not included.*

$505,000 Highest Price Paid in Osage Sale

Tracts near record high leases of last spring not rated so high in this week's bidding at Pawhuska

By W. Lee Sloan

Pawhuska, Okla., June 30.—The Phillips Petroleum Company of Bartlesville, Oklahoma, occupied the premier seat in millionaire row in the Constantin Theatre here today, when the curtain ascended for the twenty-third Osage sale of oil leases. With a maximum bid of $505,000, the company bought tract No. 119, comprising the southeast 160 acres of section 11-27-5, offsetting their own lease to the east, a 160-acre tract purchased during the March sale, for $1,765,000.

The Carter Oil Company was perhaps the most active competitor of the Phillips Company on every bid, and was successful in purchasing two tracts in the Burbank field, one being No. 120, the northeast 160 acres of section 13-27-5, and the northwest 160 acres of the same section. These tracts cost the Carter Company $835,000.

Total receipts from the sale amounted to $2,263,200, and 42 tracts were passed by the auctioneer for lack of an initial bid.

All the large companies annually represented at the Osage sales had representatives present with the exception of the Prairie Oil and Gas Company and the Sinclair Oil and Gas Company.

Skelly, Phillips, Gypsy, Carter, The Texas Company and the Mid-Kansas Oil and Gas Company led in the active bidding for the high priced tracts.

The Carter Oil Company's bid of $13,000 on the northwest quarter of section 21-26-6, was rejected by the Indian agency.

On the east side of the county the Superior Oil Company secured the northwest quarter of section 10-23-8 at Hominy, for $9500. Alcorn Oil Company bought the southwest quarter of section 21-12-8 for $20,000; Phillips Petroleum purchased the southeast quarter of section 10-21-9 for $22,000; Indian Territory Illuminating Oil Company secured the northwest quarter of section 1-21-8, and Clint Moore purchased the northeast quarter of section 2-21-8 for $55,000, in the most interesting bidding.

In commenting on the sale K. C. Heald, government geologist, said that the sale had netted more money than he had anticipated.

Tract No. 122, in the Burbank field, was bought by the Phillips Company for $225,000. This 160-acre tract is an east offset of the Midland Oil Company tract, for which that company paid $1,990,000 last March, the highest bid ever made on a tract in the Burbank field.

Below is given a list of the tracts sold, their purchasers and the amount paid:

Tracts That Were Sold and What They Brought

Tract No.	Purchaser	Price
1	C. W. Titus	$1,800
2	Mid-Kansas	2,400
3	F. N. Breen et al	250
4	J. A. Kennedy	225
5	H. P. White	100
6	Union Pet. & Supply Co.	175
7	H. P. White	100
8	F. G. McClintock	700
9	F. G. McClintock	700
10	Roy Branstetter	600
12	Devonian Oil Co. et al	11,800
13	Duffield & Howard	4,200
14	Wahshashe Oil Company	1,300
19	Mid-Kansas	5,000
21	Mid-Kan., Devonian O. Co.	21,000
23	G. G. Lee, Bartlesville	500
24	Chocoben Oil Company	500
28	Phillips Petroleum Co.	5,000
29	The Texas Company	1,100
30	Phillips Petroleum Co.	22,000
31	Phillips Petroleum Co.	3,400
33	Devonian Oil Company	1,200
34	Petroleum Drilling Corp.	500
38	The Texas Company	500
40	Petroleum Drilling Corp.	500
42	John Botts	500
51	Elsie M. Bruce	500
52	Elsie M. Bruce	500
55	I. T. I. O. Company	37,000
58	Clint Mooré	65,000
57	Waite Phillips	2,600
60	J. H. Markham, Jr.	500
63	Beal & Plum	500
65	Beal & Plum	500
66	Thompson & Black	500
68	Acacia Oil & Gas Co.	500
69	The Texas Company	2,500
70	Superior Oil Company	9,500
72	Alcorn Oil Company	20,000
73	Beacon Oil Company	65,000
74	Alcorn Oil Company	500
77	Ernest McCarty	1,000
78	B. P. McDonald	1,300
83	Ernest McCarty	500
84	Union Pet. & Supply Co.	9,200
85	Union Pet. & Supply Co.	16,500
86	J. H. Markham, Jr.	8,100
87	Samuel McGrath et al	2,500
88	Samuel McGrath et al	4,500
89	Gypsy Oil Company	30,000
90	A. G. Oliphant	1,100
91	Western American Oil Co.	1,000
100	J. H. Markham	1,100
103	J. H. Markham, Jr.	500
	East Side Tracts Resold	
15	J. A. Kennedy	800
53	J. H. Markham, Jr.	500
61	Waite Phillips	500
62	Waite Phillips	500
76	Aaron Cohen	500
	Tracts West Side	
106	Carter Oil Company	13,000
110	The Texas Company	141,000
113	Tidal Oil Company	600
115	John Botts	500
118	Carter Oil Company	310,000
119	Phillips Petroleum Co.	505,000
120	Carter Oil Company	230,000
121	Carter Oil Company	405,000
122	Phillips Petroleum Co.	225,000
123	The Texas Company	500
124	The Texas Company	500
125	The Texas Company	1,900
126	The Texas Company	2,500

Cromwell Operators Fail To Agree on Curtailment

Tulsa, Okla., June 28.—For the seventh time in two weeks operators in the Cromwell pool of Seminole County met in an effort to shut down drilling wells and to shut in producing wells if possible. When the meeting had adjourned the group had not reached an agreement and the proposed curtailment program was not adopted.

Of the 22 operators in the pool but 15 responded to the call of the shut down committee. With seven operators absent, and it being necessary to have the unanimous approval of every operator, the result of the call was evident before the meeting had begun.

After a lengthy discussion of the shut down plan the committee voted to adjourn, subject to call.

In a message to the press Frank Carter, corporation commissioner of Oklahoma, warned operators in the state that unless something is done to shut down wells or curtail drilling the commission would take a hand in again inaugurating proration.

The price of crude oil still maintains an early spring level and the major purchasers have shown no signs of cutting the price, pending the action of the proposed shut downs. What effect the defeated plan at Cromwell will have on the present market will best be shown by the action of these purchasers in the next few weeks.

Spud for 3000 Foot Test In Grimes County, Texas

Houston, Texas, July 1.—A wildcat test financed by Canadian interests has been spudded by L. F. McCausland and others on the G. W. Dodd land, located about 12 miles due north of the big gasser brought in last year by Cuthrell et al in Grimes County. The new test is about three miles west of the town of Iola, and a contract has been let to C. Graham of Fort Worth to drill to 3000 feet with rotary equipment.

Spending $600,000 Not So Difficult

Coal Oil Johnnie did it and then went back to the farm and oblivion

By Harry Botsford

HE WAS a tall, unlicked, slender, blonde cub just under age. For several years he had hauled oil and during that time he had mixed with the hard-boiled, hard-fisted men who toiled, broiled and froze along Oil Creek—a rough, tough school if ever one existed. Jean pants, gleaming with a crust of dust and oil were tucked into the tops of cowhide boots, boots well worn and covered with mud and muck, an old blue flannel shirt, open at the neck and a dented old derby completed his costume. Perched on the seat of his wagon piled high with barrels of oil, his complacent blue eyes took in the world of oildom.

His team plodded along, one of a long procession of teams—another procession loaded with empties passing along in the opposite direction. All the drivers knew this slender youth and hailed him with jovial profanity, in answer to which cries, his own profanity proved so verbose, so startlingly vivid and original and so scorching that his driver friends passed by chuckling, "Johnny Steele sure has the world whipped when it comes to real out-and-out cussin'."

Now this was praise indeed—one might even say that it was praise from experts, men well grounded, versed and erudite in the art and science of profane utterance.

Perhaps the picture is a trifle dark; true this youngster did "cuss," but he was surrounded on all sides by men who unconcernedly "cussed" and swore on the slightest provocation. On the other hand, he had a number of equally good qualities: he did not drink, he did not smoke, he did not gamble. He was a hard and steady worker—had been for years. He had married at 18, as did most of the youngsters of his time.

In a measure, he had a real grievance against a world which had treated him a trifle unkindly. He was an adopted child, grandson of a Mrs. McClintock, a queer, austere and frugal lady whose husband was dead and who owned, in fee, the famous McClintock farm at McClintockville near Rouseville on Oil Creek—a farm thickly dotted with large, producing oil wells. The Widow McClintock was indeed a thrifty soul, although her daily income approximated $3000, and she insisted that her grandson and heir should toil and sweat and earn his daily bread—and sometimes butter. She herself did her housework and lived simply, almost meagerly—a starved and narrow existence in the midst of plenty and affluence.

Work! Work! Work!

In these surroundings, John W. Steele, later well known as "Coal Oil Johnny," came to early manhood—a youth who worked hard and thought and brooded considerably on the injustice of life. He watched his friends and neighbors acquire wealth and spend it for comforts and luxuries. While he watched all these events it is small wonder that a bitter resentfulness grew within him; it is small wonder that the wistful desire for the right life, liberty and the pursuit of happiness, grew into an obsession that was thwarted, strangled and thoroughly squelched by the dominant selfishness and grasping parsimony of his grandmother. In the light of later events, we must needs bear these early influencing facts in mind; remember his youth spent sweating, working long hours at small pay—while an income of $3000 a day rolled in to the credit of his grandmother.

In March of 1863 Mrs. McClintock did a bit of pioneering which resulted in her death an hour later. This fatal act consisted in pouring no small quantity of kerosene on the kitchen fire to stimulate it. So successful was this effort in chemical experimentation that the old lady was burned to death in the conflagration that ensued, and so far as is known she was the first of a long list of tragedies which have resulted from this cause.

The will was read in due time and the entire estate was found to be bequeathed to John W. Steele, now aged 20. William Blackstone was appointed guardian by the court of Venango County, and he gave the young man a reasonable allowance until he should reach his majority. During this interim young Steele conducted himself in a manner of commendable and irreproachable virtue. Yet there was an ominous gleam in his keen blue eyes, a nervous tension which should have indicated to the observing bystander, had there been any such, some sort of repressed and pent-up emotion which was merely biding its time for outlet.

I pray that the reader will not gather that John Steele was ignorant or illiterate—far from it. In his experience at court it had been proven that he was a responsible person, capable of administering his affairs in a manner satisfactory to the judge and to his guardian.

And so, on John W. Steele's twenty-first birthday Mr. Blackstone turned over to him his legacy. Originally it had amounted to $200,000 in cash found hidden in the old home (which, by the way, still stands) and within the year this had reached the very respectable sum of $300,000 in round numbers.

Philadelphia Bound

When the control of the estate passed to him, and he became the actual possessor of the money involved, John Steele's eyes blinked rapidly, his hands twitched a bit and within him a voice sang and swelled to a grand chorus. At once the young gentleman drew his first check for a sizable sum, bought a first class ticket for Philadelphia and announced with considerable relish that he was going to take a little trip and see some of the world. What he really meant was that it was his intention to paint the said world a bright, flaming red—a gorgeous and downright crimson wherein plenty of paint and energy would be used with all of the pent-up enthusiasm of youthful devilishness.

Three months later the newspapers of the world were filled with the wild and daring escapades of "Coal Oil Johnnie," as the metropolitan press promptly dubbed him. He became known far and wide as the world's greatest spender—likewise the prize chump and champion sucker of all time.

The press has always grossly exaggerated the fortune he squandered. Judged by present standards it wasn't very large—all told a matter of about $500,000—and it took him several years to spend it—so you see his pace wasn't as fast nor as reckless as we have been led to believe. To illustrate—only a few weeks ago the writer read in a Sunday supplement (sic.) that "Coal Oil Johnnie" spent upward of several million dollars. Bunk! The vapid and truthless vaporings of some desk-weary pen pusher who never glimpsed a derrick and who wouldn't know a sampson-post from a mud-sill.

"Coal Oil Johnnie" had been lied about more than the kaiser, the late war and the K. K. K.—and that's going a few! But back here in John Steele's home territory, old timers who knew him place a different estimate on him than do the sensation mongers of the warmed-over tales which adorn the Sunday supplement of our present day papers.

Oh, yes, Johnnie did polish things up a bit! Make no mistake on that score. His prodigality was broad in its scope, almost limitless in its ramifications—yet he never bathed in a tub of champagne—he never lighted cigars with $100 bills. On the other hand, his spending usually benefited some one who deserved it.

For example, he gave $2800—one day's receipts from his wells and royalties—to a Civil War monument erected in the park at Franklin, Pa. This shaft of white marble still stands and it was the second memorial erected in the United States to the fallen heroes of the Civil War.

King John of the Oil Fields cut a wide swathe in Philadelphia and New York. His prodigality was enormous and likewise spectacular. He never did things by halves nor did he hide his light under the well known bushel.

He bought carriages and gave them away after a single drive; he bought champagne by the case and gave it to certain ladies of the ballet at the old Fox playhouse in Philadelphia. He cultivated a fine taste for diamonds, good cigars and vintage wines. He learned to play poker and became a

(Continued on page 30.)

CRUDE OIL PRICE QUOTATIONS FOR ALL FIELDS

Current Postings

EASTERN STATES

	July 5 1924	July 5 1923
New York Transit	$3.75	$3.25
Bradford (Pa.)	3.75	3.25
Other Pa. Grades	3.25	3.00
Cabel	1.70	1.71
Ragland	1.00	.90
Corning	1.90	1.70
Somerset, medium	1.80	1.55
Somerset, light	2.00	1.75

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Daviess, Barren, Cumberland and Monroe Counties.

33 gravity or below	1.85	...
33 to 35.9	1.95	...
Above 35.9	2.50	...

CENTRAL STATES

Illinois	$2.07	$1.87
Indiana	2.08	2.75
North Lima	2.28	2.18
South Lima	2.28	2.18
Plymouth	1.45	1.25
Lodi	1.80	...
Princeton	2.07	1.87
Waterloo	1.55	1.35
Wooster	2.00	2.15

MID-CONTINENT
(Prairie Prices)

Below 30 grav.	$1.25	$ ...
30 to 32.9 grav.	1.45	...
33 to 35.9 grav.	1.75	...
36 to 38.9 grav.	2.00	...
39 gravity and above	2.25	...
Below 28 grav.	$ .99	$ ...
28 to 30.9 grav.	1.00	...
31 to 32.9 grav.	1.10	...
33 to 35.9 grav.	1.35	...
36 and above	1.50	...
Corsicana, light	$1.50	$ ...
Corsicana, heavy (at wells)	.90	...
Mexia	1.50	...

NORTH CENTRAL TEXAS
(Magnolia Prices)

Corsicana, light	2.00	1.00
Corsicana, heavy	1.00	.65
Thrall	1.00	1.50
Mexia	2.00	1.00
Currie	2.25	1.00

SOUTH TEXAS

Mirando (Texpata)	.80	.75
Mirando (Magnolia)	.75	...

SOMERSET

Below 33 gravity	$1.15	$ ...
33 to 35.9 gravity	1.40	...
36 to 38.9 gravity	1.60	...
39 gravity and above	1.75	...

GULF COAST

Grade "A"	$2.00	$ ...
Grade "B" at Blue Ridge, Hull and Pierce Junction	$1.70	...

LULING

All gravities	.75	...

LOUISIANA-ARKANSAS
Caddo

38 gravity and above	$1.85	$ ...
38 to 37.9 gravity	1.75	...
32 to 34.9 gravity	1.65	...
Below 32 gravity	1.50	...

Homer

35 gravity and above	1.85	...
33 to 34.9 gravity	1.75	...
31 to 32.9 gravity	1.65	...
Below 31 gravity	1.50	...

COTTON VALLEY

	July 5 1924	July 5 1923
All grades	$1.00	...

Haynesville

33 gravity and above	1.75	...
Below 33 gravity	1.65	...

Bull Bayou

38 gravity and above	1.80	1.60
35 gravity to 37.9 gravity	1.65	1.50
32 to 34.9 gravity	1.50	1.45
De Soto crude	1.85	1.80
Crichton	1.65	1.45
Bellevue	1.75	.85
Jennings	2.00	1.75
Vinton	2.00	1.75
Edgerly crude	1.80	1.75

Smackover

	Texas Co.	Standard of La.	
26 gravity and above	$1.20	$1.20	...
25 to 25.9 gravity	1.05	1.05	...
24 to 24.9 gravity	.95	.95	...
Below 24.0 gravity	.85	.85	...

El Dorado

33 gravity and above	1.85	...
Below 33 gravity	1.75	...
East Field (Calion)	1.00	...

Stephens District

(Posted by Atlantic Oil Producing Company)

28 gravity and above 60 degrees	$1.40	...
26 to 27.9 gravity at 60 degrees	1.35	...
23 to 25.9 gravity at 60 degrees	1.20	...
Below 23 gravity at 60 degrees	1.00	...

WYOMING—MONTANA
Wyoming

Elk Basin	1.95	1.70
Grass Creek	1.95	1.70
Rock Creek	1.70	1.35
Lance Creek	1.90	1.70
Mule Creek	1.10	.95
Big Muddy	1.50	1.25
Salt Creek	1.60	1.35
Osage	1.90	1.80
Hamilton Dome	1.55	1.35
Pilot Butte	1.25	1.10
Landers	.70	1.00
Torchlight-Greybull	1.90	1.80

Montana

Sunburst	1.05	.80
Cat Creek	1.95	1.85

CALIFORNIA
(Crude oil prices at well.)
Los Angeles and Orange Counties

14 to 19.9 gravity	$1.00	$ .60
20 to 20.9 gravity	1.01	.61
21 to 21.9 gravity	1.02	.62
22 to 22.9 gravity	1.03	.65
23 to 23.9 gravity	1.05	.68
24 to 24.9 gravity	1.07	.71
25 to 25.9 gravity	1.10	.74
26 to 26.9 gravity	1.13	.77
27 to 27.9 gravity	1.16	.80
28 to 28.9 gravity	1.19	.83
29 to 29.9 gravity	1.22	.86
30 to 30.9 gravity	1.25	.89
31 to 31.9 gravity	1.28	.92
32 to 32.9 gravity	1.31	.95
33 to 33.9 gravity	1.34	.98
34 to 34.9 gravity	1.37	1.01
35 gravity and above	1.40	1.04
Fuel Oil	1.40	...

CANADIAN CRUDE

*Petrolia	2.68	2.58
*Oil Springs	2.75	2.65

*Plus 2½ cents bounty.

MEXICAN CRUDE

Tuxpam (f.o.b. buyers tanker and tax	1.59	...
Panuco (f.o b. buyers tanker and tax	1.21	...

came to have stable prices, while Powell came in for reduced posted prices over a longer period.

In that period between June and August when production was at its peak, the buying concerns maintained old prices, although they took only as much oil as they could market currently. It was early in September that the price structure came into such a jumble that prices had to be revised.

Another similarity of the proration orders of this year and last is that prices at the inception of each order is almost equal. The low price of June 26, 1923, was $1.10 for oil for 28 degrees or lower. The low price when proration began June 30 of this year was $1.25 for oil of 30 degrees or lower. The high mark of last year was $2.20 for oil of 41 degrees or higher. It is now $2.25 for oil of 39 degree or higher.

Undoubtedly buying agencies fought shy of lowering prices last year. They held their quotations, while independent buyers took surplus oil at half the posted price. Price changes came after proration had failed to check output sufficiently.

With the present decision on proration some of the buying agencies have announced that they will run all oil from present connections, storing half of it for the account of the producer at a small cost. This would indicate that the major purchasers again will try to ward off violent downward trend of prices.

The producer in considering his present condition can remember this from his experience of last year—proration and lower prices will in time bring decreased output from wells.

The producer may escape much of the disaster of proration and lower prices by adopting a development program in keeping with the need for curtailment.

Consolidation in Commerce Department Effects Oil

Washington, D. C., July 1.—Consolidation of the petroleum division of the bureau of foreign and domestic commerce with the nonferrous metals section of the iron and steel division, the new office to be known as the minerals division, and the appointment of Guy C. Riddell of Rye, N. Y., as its head, was announced last week by Secretary of Commerce Hoover.

Mr. Riddell graduated from the Massachusetts Institute of Technology in 1904, and for a number of years thereafter was actively engaged in mining operations. He has served as metallurgical adviser to the United States tariff commission, and has also had experience in the import and export end of the industry.

It is the hope of Secretary Hoover that the new division will develop a broad and useful service to the oil and mineral industries, and many features are to be added with the object of providing maximum assistance to manufacturers and exporters of mineral commodities.

BEHIND the Sinclair trade-mark are Sinclair's Refineries producing a line of oil products of high uniform quality—a quality that is maintained in every can, barrel or tank car showing the Sinclair trade-mark.

SINCLAIR REFINING COMPANY

New York: Sinclair Oil Bldg., 45 Nassau St. Chicago: 111 W. Washington St.

Cable Address: "Lucent"

Refineries:

EAST CHICAGO, INDIANA
KANSAS CITY, KANSAS
COFFEYVILLE, KANSAS
CUSHING, OKLAHOMA
MUSKOGEE, OKLAHOMA
HOUSTON, TEXAS
WELLSVILLE, N. Y.
PHILADELPHIA, PA.
(under construction)

SINCLAIR OILS

A New Mexico producer—Left to right are: Van Welch, president of the Illinois Producers Company which recently brought in a good one; Jim Barry, driller and Ed. Wingfield toolie.

gambler for the sheer pleasure of betting 'em high and losing with a smile.

Some Song!

He became the easy mark of many sharpers who profited greatly thereby—he gave expensive suppers to his friends and at one of these gave a negro singer a $1000 diamond because he liked the song. No man down on his luck ever asked John Steele for help who did not get it in generous proportions. So busy was he in his saturnalia (if I may borrow the word from the keynoter of the democratic convention) of spending, that he forgot his family.

Spending became a disease with him—a devastating disease. He bought a third interest in a minstrel show and brought the troupe back to the oil fields to entertain his old friends and companions. One of his first acts after acquiring his interest in the show was to order $5000 worth of wood cuts—all the way from one sheet to 24-sheet in size, and as a result of his enterprise (the $5000 being his own contribution) his troupe was more lavishly advertised than any other of the time. At Utica, New York, Johnnie gave the troupe a supper which cost him $1000. (This was back in the days when such establishments as the Palmer House in Chicago gave one a choice of twenty meats on the menu for 75 cents.) And it was a royal meal. It was here that Steele conceived the idea of a special train and after having one he was so taken with the idea that all engagements of the minstrels were canceled for a period of two weeks while Johnnie took them on a vacation trip which marked a highwater point in spending. During this time Johnnie not only provided entertainment for his guests, but paid all the actors their salaries and paid his partners an estimated profit.

In Chicago he proceeded to enliven things in his own peculiar manner, and finally disclosed his plan for giving a benefit for a couple of indigent actors, offering to donate the minstrel troupe and to hire the best playhouse in the city. The owner of the Crosby Opera House stated flatly that they didn't care to rent the house for a performance by a "bunch of niggers." Johnnie received the news with ominous calm and then armed with funds, hunted up the owner.

"I want to buy," he stated crisply.

"We won't sell," returned the owner.

"I'll make it worth your while," smiled King Johnnie, and began to place bills of large denomination before the astonished opera house owner, until he had a pile estimated at more $200,000.

"Oh, hell, if you're that kind of a man you can have the place rent free for your benefit," exclaimed the owner, a Mr. Root. The benefit was a big success, netting nearly $5000, and the day following the performance Mr. Root found himself the owner of one of the finest carriage horses money could buy—the gift of "Coal Oil Johnnie."

No Piker

Steele obtained no end of publicity when he attempted to buy the Continental Hotel in Philadelphia for the sole and childish purpose of firing a clerk who appeared to view "Coal Oil Johnnie" with impudent contempt and cold disapproval, which ruffled the young spendthrift. He didn't succeed in buying the hotel, but he did rent it for a day for $8000, fired the obnoxious clerk, installed his friends as officers and had signs hung up stating that everything was free for the day. It was, strictly speaking, a most hectic day. Every thirsty and hungry pilgrim in the city departed full of food and drink and the number of casualties were remarkably few.

The management gladly took back their property—as a matter of fact they made no profit on the deal—promptly reinstatde the clerk and when Johnnie wrathfully noted this he went across the street, made a dicker with the owners of the Girard Hotel to lower their prices and to fight the Continental. This cost him real money, but it also cost the Continental money and Johnnie had reached a point where he felt he must gratify every passing passion, every fleeting whim.

Friends often approached him with the kindly warning that soon he would be broke if he didn't put on the brakes, but Johnnie waved them aside with a grand gesture and continued his orgy of spending, until the grand crash came in 1866, when his farm at McClintock had to be sold.

Ignominiously, Johnnie returned to Rouseville, became baggage master, induced his wife to take him back and settled down, a calmer and wiser—but who shall say sadder?—citizen. He moved at length to Franklin, where he opened a meat market, made some money, sold out and went to Nebraska. And at last reports say he became a solid citizen, a good husband and father, and fought shy of all publicity.

And thus endeth the true tale of "Coal Oil Johnnie"—a most entertaining chap who harmed himself more than he ever did any others—and who was for all his faults, a rather lovable fellow, hungry for life and happiness and who didn't know how to get it or to hold on to the means of getting it when he had it.

Union Oil Company to Use Radio-compass on Tankers

Los Angeles, Calif., July 3.—La Placentia, one of the ships belonging to the deep sea fleet of the Union Oil Company of California, has recently been equipped with a radio-compass, the first device of its kind to be used on ships. The radio-compass is said to be especially valuable because of its safety feature and is well adapted to coastwise vessels, in that it enables the ship master to determine his exact position at sea by communicating by wireless to the nearest land radio station.

The system is based on the equipment of selected important lighthouses and light vessels along the coast with apparatus for sending radio signals of simple and easily recognized characteristics during the continuation of fog or thick weather, by means of which the navigator of any vessel provided with a radio-compass may take definite bearing to guide or to locate his ship, although no object is visible. Fundamentally the advantages of the radio-compass are the same as in having on the ship the navigational instruments for sight bearings.

All deep sea vessels belonging to the Union Oil Company will be equipped with the radio-compass.

Whitehill Will Retire After 61 Years in Oil

Corsicana, Texas, June 30.—F. T. Whitehill, field superintendent for the Magnolia Petroleum Company in the Corsicana shallow field, is to retire from active service on July 1 after devoting 61 years of his life to the oil industry, of which 26 years has been spent in the Corsicana field. Whitehill plans to return to his birthplace in Pennsylvania, where he started work in the oil business when 15 years of age.

Summary of Field Operations for June

Production Maintained Level During June

(Continued from page 24.)

pleted wells on the pump doing between 4000 and 5000 barrels daily, and gives promise of extending further to the southwest along the fault line. Statistics on this pool are included in the Mexia totals.

Eastern States

PENNSYLVANIA

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Allegheny	3	2	1	..	52
Beaver	2	1	1	..	2
Bradford	60	57	..	3	213
Bullion	1	1	..	..	10
Butler	14	10	2	2	42
Center-Middle	8	4	3	1	37
Clarion	9	4	4	1	9
Greene	18	3	14	1	105
Mercer	2	2	..	..	4
Venango	2	19	..	1	46
Washington	2	1	1	..	20
Totals	139	104	26	9	540

INDIANA

Cass	1	..	..	1	..
Clay	1	..	..	1	..
Decatur	1	..	1	..	..
Dubois	1	..	..	1	..
Gibson	2	2	..	..	12
Harrison	1	..	1	..	..
Jay	5	3	..	2	85
Lincoln	1	1	..	..	12
Pike	1	1	..	..	15
Randolph	1	1	..	..	20
Sullivan	1	..	..	1	..
Totals	16	8	2	6	144

TENNESSEE

Clay	..	..	..	..	..

WEST VIRGINIA

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Boone	6	..	6	..	..
Braxton	2	..	2	..	..
Cabell	6	1	5	..	3
Calhoun	6	2	4	..	15
Clay	2	2	..	..	35
Doddridge	13	3	6	4	65
Gilmer	13	2	10	1	17
Harrison	5	1	3	1	5
Kanawha	9	2	7	..	7
Lincoln	12	1	11	..	10
Marion	3	1	1	1	15
Marshall	2	..	2	..	..
Pleasants	8	4	1	3	23
Ritchie	23	6	9	8	35
Roane	5	..	4	1	..
Tyler	5	1	3	1	2
Wayne	1	..	1	..	..
Wetzel	5	..	4	1	..
Wirt	3	2	..	1	9
Wood	6	4	..	2	14
Totals	135	32	79	24	255

OHIO

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Allen	4	4	..	..	24
Athens	5	..	4	1	..
Auglaize	3	3	..	..	50
Belmont	1	1	..	..	8
Coshocton	2	2	..	..	65
Cuyahoga	2	..	1	1	..
Darke	2	2	..	..	63
Hancock	3	2	1	..	30
Hocking	7	5	2	..	263
Holmes	5	1	4	..	25
Jackson	1	..	1	..	..
Jefferson	2	1	..	1	10
Knox	12	9	..	3	39
Licking	13	7	3	3	106
Lorain	2	..	2	..	..
Lucas	1	..	..	1	..
Medina	2	..	..	2	..
Mercer	9	8	..	1	87
Morgan	4	2	..	2	13
Monroe	10	3	1	6	8
Muskingum	2	2	..	..	8
Noble	20	10	1	9	23
Ottawa	8	8	..	..	62
Paulding	1	1	..	..	300
Perry	8	7	..	1	210
Richland	4	..	4	..	..
Summitt	1	..	..	1	..
Washington	11	6	1	4	19
Wayne	7	5	2	..	60
Wood	12	10	..	2	94
Van Wert	1	1	..	..	80
Totals	168	100	27	38	1,647

KENTUCKY

Allen	34	20	..	14	227
Barren	26	22	..	4	190
Cumberland-Monroe	15	5	..	10	1967
Elliott	3	3	..	..	17
Estill	1	1	..	..	3
Greene	3	..	2	1	..
Hopkins	2	2	..	..	100
Johnson Magoffin	13	13	..	..	113
Lawrence-Johnson	8	8	..	..	205
Lee	15	15	..	..	596
Morgan	1	..	..	1	..
Owensboro	10	8	..	2	57
Owsley	3	2	..	1	30
Powell	2	1	..	1	15
Simpson	1	1	..	..	3
Warren	19	15	..	4	185
Wayne	3	2	..	1	14
Totals	159	118	2	39	3,722

NEW YORK

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Allegany	25	22	..	3	77
Allentown Field	1	1	..	..	4
Bolivar	4	4	..	..	25
Kansas Hollow Field	2	2	..	..	9
Richburg Field	1	1	..	..	4
Salt Rising Field	1	1	..	..	3
Wirt	2	2	..	..	..
Totals	36	33	..	3	122

MISSISSIPPI

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Pike	..	..	..	..	..

ILLINOIS

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Clark	7	7	..	..	435
Coles	1	..	..	1	..
Crawford	4	3	..	1	6
Lawrence	2	1	..	1	15
Marion	2	2	..	..	125
Monroe	2	2	..	1	20
Wabash	7	5	..	2	560
Totals	25	19	..	6	1,161

Oklahoma

OKLAHOMA SUMMARY OF MONTHLY PRODUCTION OF FIELDS

Fields—	Production
Burbank	2,692,440
Bristow	1,682,,100
Osage (outside of Burbank)	1,528,410
Tonkawa	1,043,880
Cushing	758.130
Okmulgee	733,350
Stroud	684 960
Cromwell	603,120
Hewitt	600 630
Healdton	435,330
Duncan and Walters	288.240
Wewoka	241.920
Other Fields	2.371,800
Totals	13,685,610

OKLAHOMA SUMMARY

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Beckham	2	..	..	2	..
Burbank Field	115	115	..	..	29,268
Caddo	5	5	..	..	250
Carter	20	15	..	5	1,107
Coal	1	..	..	1	..
Cotton	1	..	..	1	..
Creek	49	29	1	19	13,697
Garvin	1	..	..	1	..
Grady	5	..	..	5	..
Hughes	8	6	..	2	2,345
Jefferson	2	..	1	1	..
Kay	8	4	1	3	3,003
Lincoln	5	5	..	..	9,133
Love	1	..	..	1	..
McIntosh	1	..	..	1	..
Muskogee	5	3	1	1	310
Noble	7	6	..	1	417
Okfuskee	9	3	1	5	323
Okmulgee	42	24	4	14	2,557
Osage	42	28	1	13	8.755
Pawnee	8	6	1	1	1,856
Pottawatomie	1	1	..	..	8
Roger Mills	2	..	..	2	..
Seminole	18	16	1	1	14,154
Stephens	6	2	2	2	60
Tillman	6	5	1	..	215
Tulsa	17	10	2	5	1,595
Washington	1	1	..	..	20
Wagoner	3	2	..	1	125
Totals	391	286	17	88	89,098

Kansas

KANSAS MONTHLY PRODUCTION OF FIELDS

Fields—	Production
Greenwood	537 510
Eldorado	492,330
Elbing and Peabody	276,840
Fox-Bush	165,510
Augusta and Douglas	107,340
Blankenship	97,110
Florance and Covert	80,010
Leon and Weaver	31,110
Other Fields	437,640
Totals	2,225,400

KANSAS SUMMARY

County—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Butler	8	3	1	4	75
Chautuaqua	1	..	..	1	..
Coffee	1	1	..	..	20
Cowley	7	5	1	1	2543
Elk	11	4	3	4	195
Greenwood	38	23	6	9	2360
Harvey	1	..	..	1	..
Lyons	2	1	..	1	5
Marion	1	1	..	..	60
Totals	70	38	11	21	5,258

Louisiana

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
Anse La Butte	..	...	..	...	.....	600
Bellevue	6	5	..	1	90	168,660
Bull Bayou	..	...	..	...	.....	151,200
Caddo	3	3	..	...	85	415,800
Cotton Valley	6	4	2	...	12,715	97,290
Edgerly	1	1	..	...	50	16,500
Elm Grove	..	...	..	...	.....	30,180
Evangeline	2	...	..	2	.....	17,490
Haynesville	..	...	..	...	.....	568,950
Homer	..	...	..	...	.....	238,800
Monroe	14	...	14	...	.....	.....
Naborton Dist.	1	...	..	1	.....	.....
Oakland	..	...	..	...	.....	.....
Sarepta	1	...	1	...	.....	3,900
Vinton	5	5	..	...	178	166,140
Wildcats	5	...	1	4	.....	.....
Totals	44	18	18	8	13,118	1,875,510

Arkansas

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
El Dorado	3	3	..	...	285	390,780
Irma	3	2	..	1	140	.....
Smackover	163	149	8	6	39,660	3,279,650
Stephens District	5	5	..	...	150	74,010
Wildcats	4	...	..	4	*	.....
Barbers						
Totals	178	159	8	11	40,235	3,744,440

Texas

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
N. Texas	237	147	..	90	12,723	2,560,790
Cen. & W. Texas	104	73	..	31	23,551	5,264,995
Gulf Coast	87	59	2	26	8,186	2,258,820
Tex. Misc.	22	21	1	..	27,450	1,398,180
Totals	450	300	3	147	71,910	11,482,785

NORTH TEXAS

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Archer County	146	91	55	8,559	1,019,251
Electra	35	27	8	2,175	629,440
Burkburnett	21	16	5	689	603,750
Young County	3	1	2	45	138,790
K-M-A	15	9	6	1,140	78,075
Iowa Park-Shappell	5	1	4	115	55,915
Panhandle Dist.	..	..	..	....	25,615
Petrolia-Clay County	3	1	2	*	9,000
Jack County	..	..	..	....	990
Wildcats	8	1	7	**	....
Totals	237	147	90	12,723	2,560,790

*Includes 1,000,000 Cu. Ft. Gas
**Includes 15,000,000 Cu. Ft. Gas.

CENTRAL AND WEST TEXAS

Field—	Completions	Producers	Failures	Init. Prod.	Monthly Prod.
Corsicana-Powell	19	13	6	9,130	2,924,130
Mexia Dist.	16	12	4	10,565	1,022,060
Stephens County	22	19	3	2,400*	628,540
Desdemona-Gorman	6	4	2	55†	240,825
Eastland-Ranger	13	9	4	406‡	230,290
Monran-Shackelford Coutny	..	..	..	....	119,775
Mitchell Co.	3	3	..	380	37,575
Strawn-Palo Pinto County	7	4	3	120§	26,850
Brown Co.	5	4	1	170	16,015
Reagan Co.	1	1	..	140	12,035
Coleman Co.	..	..	..	....	4,425
Thrall-Williamson County	..	..	..	.....	2,025
Scurry County	1	1	..	75	450
Wildcats	11	3	8	110	.....
Totals	104	73	31	23,551	5,264,995

*Includes 13,000,000 Cu. Ft. Gas
†Includes 10,000,000 Cu. Ft. Gas
‡Includes 11,000,000 Cu. Ft. Gas
§Includes 7,000,000 Cu. Ft. Gas

GULF COAST

Field—	Completions	Producers	Gas Wells	Failures	Init. Prod.	Monthly Prod.
Barbers Hill	..	...	..	...	.....	5,280
Batson	9	8	..	1	141	36,840
Big Hill	..	...	..	...	.....	.....
Blue Ridge	2	1	..	1	700	29,280
Damon Mound	..	...	..	...	.....	45,810
Dayton	..	...	..	...	.....	3,150
Goose Creek	11	8	..	3	1,705	331,230
High Island	..	...	..	...	.....	480
Hockley	..	...	..	...	.....	630
Hull	15	13	..	2	3,085	613,110
Humble	..	...	..	...	.....	281,700
Markham	..	...	..	...	.....	22,680
Nacogdoches	..	...	..	...	.....	3,300
Orange	16	10	..	6	1,862	306,030
Pierce Jct.	..	...	..	...	.....	11,550
Richmond	..	...	..	...	.....	6.810
Saratoga	4	2	..	2	41	36,960
Sour Lake	5	3	..	2	65	136,560
Spindle Top	6	5	..	1	162	28,380
Stratton Ridge	..	...	..	...	.....	1,200
W. Colum.	2	2	..	...	20	357,840
Wildcats	17	7	2	8	405	.....
Totals	87	59	2	26	8,186	2,258,820

MISCELLANEOUS

Luling	12	12	..	...	19,200	1,185,000
Mirando	10	9	1	...	8,250	123,000
Somerset	..	...	..	...	.....	75,600
Rockdale-Minerva	..	...	..	...	.....	14,580
Totals	22	21	1	...	27,450	1,398,180

Assistant Chemist Wanted By U. S. Bureau of Mines

The United States civil service commission announces the open competitive examination for assistant petroleum chemist.

Receipt of applications will close August 5. The examination is to fill a vacancy in the Bureau of Mines for duty at Midwest, Wyoming, and vacancies in positions requiring similar qualifications, at an entrance salary of $2400 a year. Advancement in pay may be made without change in assignment up to $3000 a year.

Applicants must have been graduated with a bachelor's degree from a college of recognized standing, such degree requiring the completion of at least 118 semester credit hours, of which at least 30 semester credit hours must have been in chemistry. In addition, applicants must have had at least two years of experience in work of either a research or technical character in petroleum chemistry, which experience must show that degree of progression necessary for the successful performance of the duties of the position.

One year of graduate work, including the completion of 30 semester credit hours, the major part of which must have been in petroleum chemistry, will be accepted in lieu of each year of the required experience.

The duties consist of general research in connection with the manufacture, production and development of petroleum and its products.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, experience and fitness, and publication or thesis to be filed with the application.

Full information and application blanks may be obtained from the United States civil service commission, Washington, D. C., or the secretary of the board of United States civil service examiners at the postoffice or custom house in any city.

Exhibitors Already Signed Insure Exposition Success

Tulsa, Okla., June 25.—Having sold space to more than 275 exhibitors, more than enough to assure the success of the second annual show, and additional applications for space coming in each day, the managers of the International Petroleum Exposition and Congress have turned their attentions to transforming the Madison-Peoria avenue area into a regular show place.

Contractors have taken possession of the grounds and the agreement is, according to those in authority, that everything to the last detail is to be completed one month before the opening date, which is October 2.

Among the first buildings to go up will be the Texas and West Virginia edifices. The dimensions of these buildings are respectively 60 by 380 feet and 50 by 200 feet, of all steel construction. All of the buildings, new and old, will be painted white inside, thus allowing any riot of color exhibitors may feel disposed to use in the adornment of their display spaces.

Electricians will follow close on the heels of the carpenters and builders, stringing wires both for illuminating and power purposes. Water, gas and steam lines are now being laid, which will be used to keep the display machinery in motion.

The management has issued an order to all exhibitors that all machinery and other exhibits must be in place the day before the exposition opens, no exhibitors will be taken care of after the opening date, October 2.

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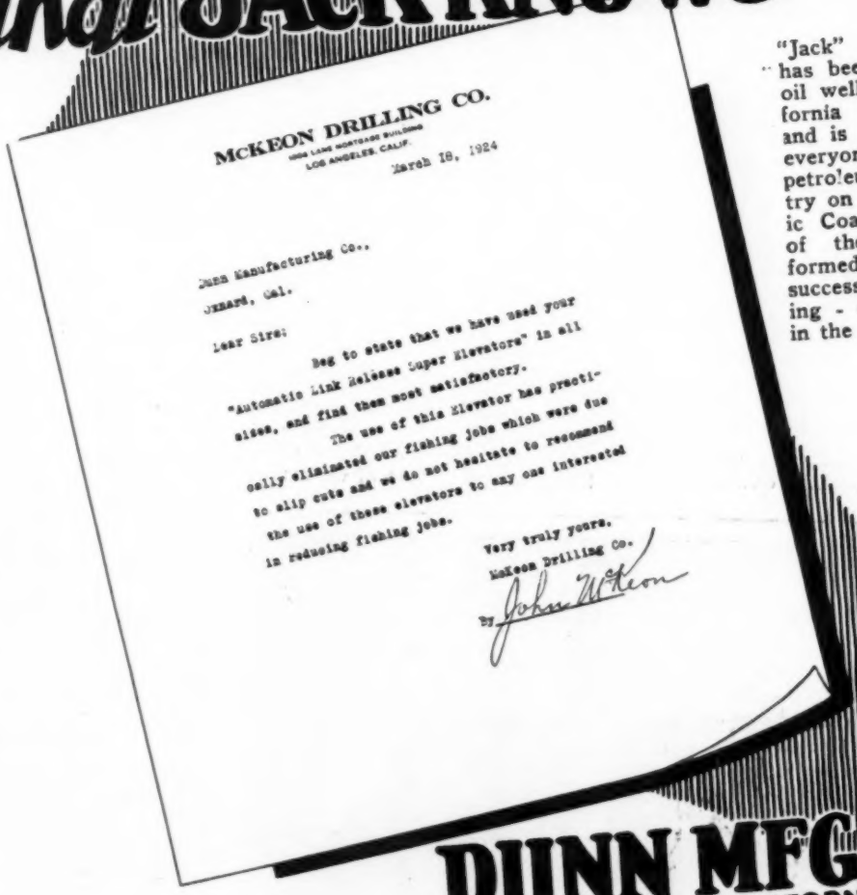

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Mud Fluid in Drilling and Protection of Wells

Interesting facts about mud used in rotary drilling revealed by tests made in Bureau of Mines Laboratory

By M. J. Kirwan *

THE use of rotary tools to drill wells in the Mid-Continent field is increasing particularly in southern and northwestern Oklahoma. The rotary method of drilling involves the use of mud laden fluid. The principal functions of mud fluid, in rotary drilling, are to carry the drill cuttings to the surface, prevent caving by mudding or "walling up" the hole and keep the cutting surface of the bit cool.

The protection of upper oil and gas deposits from loss by migration and damage by infiltrating water, while wells are drilling, presents an important problem in the use of mud fluid. In addition, mud fluid must often be depended upon to protect valuable upper oil and gas deposits during the entire life of the well. With cement, it is commonly used back of casing, in wells drilled by the rotary method, to exclude upper waters from the sand from which it is desired to produce, as well as to protect upper oil and gas deposits that are penetrated but not drained by the well. Thus it is apparent that the proper preparation and use of mud fluid and cement is of great importance as the productivity of a well may depend on these agents. In view of this the Bureau of Mines has long been interested in detail studies of mud fluid and cement in oil and gas wells and is conducting both field and laboratory tests from which it is hoped to gain additional information regarding the action of mud fluid and cement in wells. The first part of this discussion deals with some of the important phases in the preparation and use of mud fluid in the field and the last part with the results of a few of the laboratory tests that have been made.

*Petroleum Engineer, Department of the Interior, Bureau of Mines, Bartlesville, Oklahoma.

Protecting Upper Deposits

There is some difference of opinion among oil men regarding mud fluid as compared with cement for protecting upper oil and gas deposits cased off in wells. It has been argued that the complete filling of the annular space back of casing by the complete displacement of mud fluid with cement, is theoretical only. There is evidence that in some wells cement has extended several hundred feet higher than the computed height of the cement column necessary to completely fill the annular space, indicating channelling of the cement up through the mud fluid. In such wells it would be necessary to depend not alone on the cement but also on the mud fluid for protection of the oil and gas deposits back of the casing. However, it is general practice, in rotary drilled wells, to use sufficient cement to extend above valuable oil or gas deposits that are cased off. In most of the wells drilled in the Tonkawa field sufficient cement was used to extend from the shoe of the casing up to a point near the surface. A recent survey of water conditions in that field showed that comparatively few "upper sand" wells produced any water, although many of these wells were drilled within 75 feet of wells that produce from lower sands and which cased off the upper sands.

The successful exclusion of water from upper oil and gas sands in the Tonkawa field by the use of mud fluid and cement does not necessarily prove that equally successful results will be obtained in all other fields. The formations in the Tonkawa field are consolidated and it seems likely there is less chance for a mud sheath or a soft shale to partly fill a hole so that cement cannot completely encase the pipe, than in fields where soft and unconsolidated formations make operations more difficult.

Preparation of Mud Fluid

The majority of wells drilled with rotary tools in the Mid-Continent field, "make" their own mud, that is, the clay and shale beds penetrated furnish material to make sufficient mud fluid for drilling purposes. However, it is sometimes necessary to haul in clay or mud fluid from another well, particularly when drilling in "high pressure" territory where it is desirable to have a reserve pit of heavy mud available to prevent or overcome gas blow outs.

Rotary drilling wells are provided with a "rotary ditch" through which "returns" flow from the well to a settling pit. The ditch varies in width and length but is usually laid out so that the velocity of "returns" will decrease as the mud fluid travels toward the settling pit. This results in the coarser particles settling out before the mud fluid reaches the settling pit. The removal of limestone cuttings, coarse shale cuttings and sand is important, for if they are returned to the well they tend to settle out and "freeze" the tools. If the mud fluid that passes through the pumps carries coarse sand, the sand will quickly cut out the packing and pump plungers, reducing the efficiency of the pump and making frequent repairs and even "shut downs" necessary.

Desirable Qualities

For drilling purposes the essential qualities of mud fluid are weight and fluidity. Under some drilling conditions maximum plastering or wall building action may be wanted while under other conditions maximum penetration into the formation may be desired.

Heavy mud is generally used when drilling in high pressure gas territory to prevent blow outs. As thick mud is more easily "gas cut" (impregnated and lightened with gas) some drillers thin their mud fluid or even run clear water into the hole when a well shows a tendency to blow out. Thick viscous mud is sometimes mistaken by drillers for heavy mud. Mud fluid used in rotary drilling should be frequently weighed as its appearance or fluidity is not a reliable index to its weight.

The weight of mud fluid used in rotary drilling usually varies from about

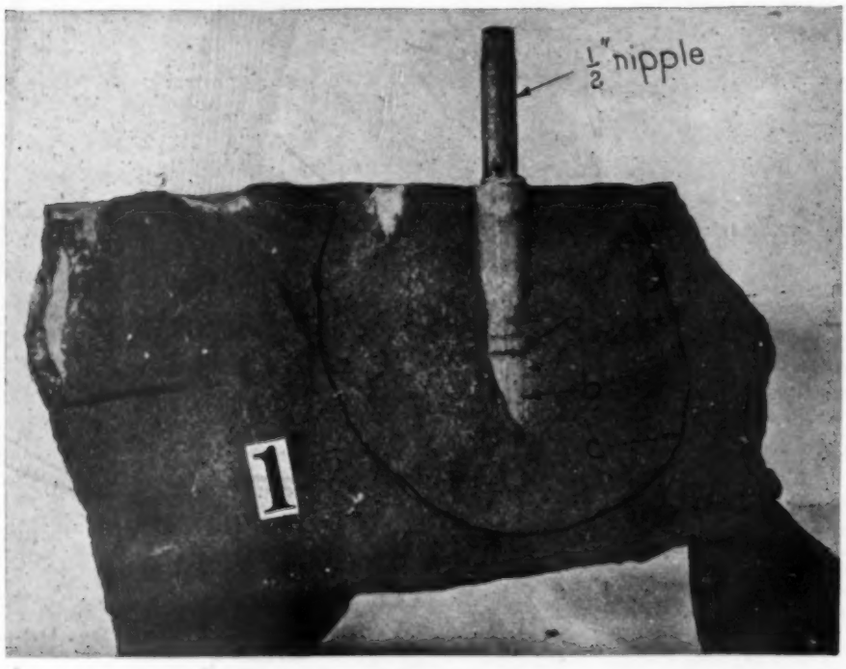


Figure 1.

Section of sandstone used in mud fluid penetration test. (a.) Bottom of nipple. (b.) Mud sheath on wall of the hole. (c.) Extent to which water squeezed from mud fluid, penetrated the sandstone.

8.75 pounds to 11 pounds per gallon. These weights are the equivalent of 65.6 pounds and 82.3 pounds per cubic foot and a specific gravity of 1.05 and 1.32 respectively. Over one hundred samples of mud fluid from about 50 drilling wells in the Tonkawa field of Oklahoma were weighed and averaged 10.4 pounds per gallon or 77.8 pounds per cubic foot. Most of these samples ranged from 10.2 to 10.6 pounds per gallon. Operators in the California fields generally use lighter mud fluid of about 9.3 pounds per gallon or 70 pounds per cubic foot. Operators in some of the Louisiana fields use a mixture of iron oxide and mud fluid that weighs from 10 to 15 pounds per gallon. The consistency of mud fluid is generally kept uniform by adding water to thin the mud or drawing on a reserve pit when thick mud is wanted. The consistency of the mud fluid used can be temporarily regulated by raising or lowering the suction pipe in the suction pit.

The viscosity or fluidity of mud fluid may be increased or decreased by the addition of certain chemicals or reagents. For example, the addition of a small amount of cement will greatly increase the viscosity of mud fluid, and also decrease the rate of settling. Tests made on mud fluid of 1.2 specific gravity showed that it settled 36 per cent in 10 days. The addition of cement in the proportion of one sack of cement to 54 barrels of mud fluid decreased the amount of settling to 12 per cent while standing 10 days. The addition of one sack of cement to five barrels of mud decreased the settling to 2.6 per cent during the same length of time. It was found by experiment that the proportions of one sack of cement to 27 barrels of mud fluid reduced the settling to six per cent and was the most economical proportion of cement to use.

Mud fluid with the best possible plastering or wall-building action is often used when drillers desire to reduce the loss of mud into the formations to a minimum as when drilling through unconsolidated sands or oil or gas sands that have been partially drained. Thick mud fluid or mud fluid of high viscosity is best suited for this work as under ordinary conditions it will penetrate formations less than thin mud fluid of low viscosity. In addition to its wall forming qualities thick mud fluid carries sand and drill cuttings from the hole better than thin mud fluid. However greater care must be exercised at the surface in separating out drill cuttings and sand from thick mud fluid than from thin mud fluid, for thick mud fluid may carry cuttings and sand into the suction pit and thence back into the hole.

Penetration Tests

Laboratory experiments at the Bartlesville Petroleum Experiment Station have shown that mud fluid can be forced a short distance into coarse grained loose or unconsolidated sand but can not be forced into sandstone. Mud fluid could not be forced into a sandstone core taken from productive sands in the Tonkawa oil field even under 2200 pounds pressure.

Mud fluid penetration tests on unconsolidated sand showed that the amount of mud (clay) penetration depends primarily on such factors as the specific gravity and viscosity of the mud fluid, pressure applied and size of the pore or space between the individual sand grains. The greatest penetration was obtained when using mud fluid of low specific gravity and viscosity and sand of coarse grains. When mud fluid was forced into the sand a filtering action took place, the clay in the mud fluid being filtered or caught on the surface of the sandstone forming a clay deposit or sheath on that surface near the point of entrance of the mud fluid into the sand.

Sand that passed through a 35 mesh screen and which was retained on a 65 mesh screen was used in a metal container 3 inches in diameter and 6 inches long for one of the laboratory tests. The bottom of the container consisted of a perforated steel plate, the diameter of the holes was one thirty-second of an inch. At the beginning of the test it was possible to pump mud fluid of 1.12 specific gravity entirely through the sand but after 30 minutes of pumping, a filter pack of clay one-half inch thick built on the face of the sand and prevented further entrance of the mud fluid into the sand at 1200 pounds pressure.

Another laboratory mud fluid penetration test was made on a sandstone core 6 inches long and 5 inches in diameter. This core was taken from the upper Hoover oil sand of the Tonkawa field of Oklahoma. Water under 50 pounds per square inch pressure passed through the core freely. Rotary mud fluid of 1.25 specific gravity was next tried; it was found that no mud (clay) could be forced into core under a pressure of 2200 pounds. Similar results were obtained when using a piece of sandstone from an outcropping three miles west of Bartlesville. Mud fluid of 1.10 specific gravity could not be forced into this sandstone under 1800 pounds gauge pressure. As pressure was applied water squeezed out of the mud fluid and wet the sandstone for a radius of about three inches from the hole leaving a wall of solid clay on the inner surface of the hole. This result is shown by a photograph, Figure 1.

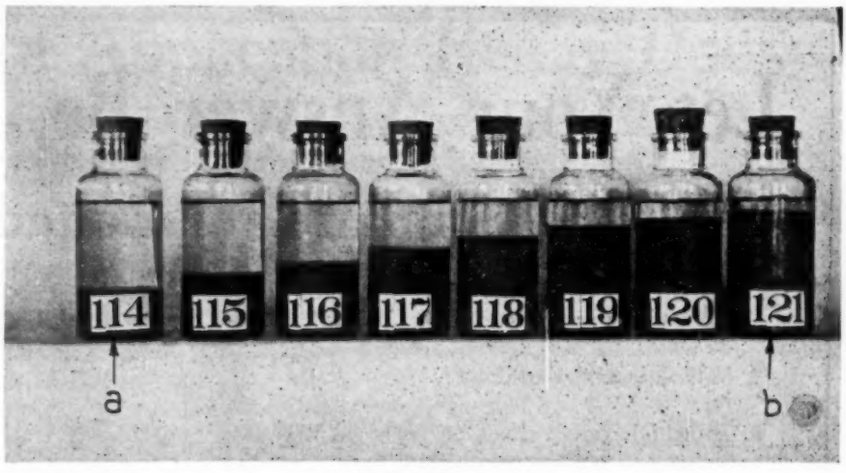


Figure 2.
Photograph showing the amount of settling in 48 hours of mud fluid of different specific gravities. (a.) Specific gravity 1.075. (b.) Specific gravity 1.40.

Settling Tests

Settling tests have been made on about 50 samples of mud fluid from rotary wells in various parts of Oklahoma and from fields of Louisiana and California. A study of these tests shows that the rate and amount of settling depend largely on the specific gravity of the mud fluid, which in turn is influenced by the percentage of clay in the mud fluid. The rate of settling of mud lined fluid of low specific gravity (light mud) is much greater during the first 24 hours than of mud fluid of higher gravity (heavy mud). For example a sample of mud fluid of 1.050 specific gravity settled in 18 hours so that 65 per cent was clear water while mud fluid of 1.405 specific gravity settled only .0.5 per cent in the same length of time. In 60 days the same sample of light mud fluid settled 82 per cent and the sample of heavy mud fluid settled 9 per cent. The amount of settling in 48 hours of other mud fluid samples of different gravities is shown by the photograph, Figure 2. The mud fluid used in this test was made from shale cuttings from a well drilled to the Bartlesville sand about three miles west of Bartlesville. The specific gravity of the mud fluid samples ranged from 1.075 to 1.40.

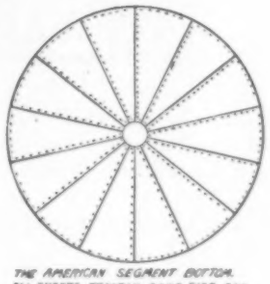
Texas Production Office At Fort Worth Abolished

Fort Worth, Texas, June 30.—The Texas Company has discontinued its production office here, and all records and office equipment have been shipped to Houston. J. C. McCue, assistant production manager and formerly in charge of the Fort Worth district office, has been transferred to Houston where he will perform the same duties as in the past. The Fort Worth district office of The Texas Pipe Line Company is not affected by this change.

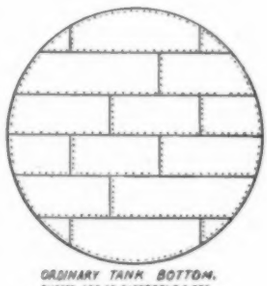
Let Your Answer Be Your Guide!

A Questionnaire for Bolted Tank Users

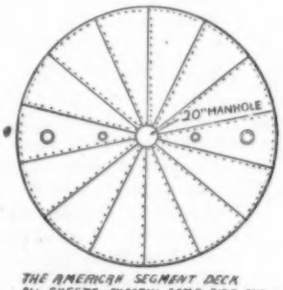
1. Which of the two bottoms at the right is more simple and practical?
2. Which is easier to erect?
3. In which can a sheet be replaced without cutting down the whole tank?
4. Which has greater strength due to its plan of construction?
5. Which of the two decks at the right is more simple and practical?
6. Which deck would you think has the greater pitch?
7. Which is easier to erect?
8. In which can a sheet be replaced most easily?
9. Which has the greater strength due to its plan of construction?
10. Look at the two tanks at the right and notice the difference in the construction of the side sheets,
11. Which is more practical and simple?



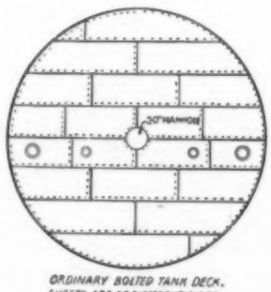
THE AMERICAN SEGMENT BOTTOM. ALL SHEETS EXACTLY SAME SIZE AND ANY SHEET CAN BE USED IN ANY POSITION



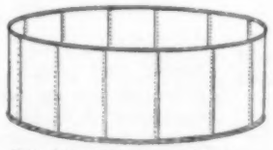
ORDINARY TANK BOTTOM. SHEETS ARE OF DIFFERENT SIZES AND ARE NOT INTERCHANGEABLE



THE AMERICAN SEGMENT DECK ALL SHEETS EXACTLY SAME SIZE AND ANY SHEET CAN BE USED IN ANY POSITION.



ORDINARY BOLTED TANK DECK. SHEETS ARE OF DIFFERENT SIZES AND ARE NOT INTERCHANGEABLE.



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What Vacuum Application Really Does

Different grades of oil make it necessary to give individual thought to each field

By Harry Pennington

THERE is a tendency in casing-head gas gathering plants toward limiting the vacuum placed upon wells and this article is to discuss the effect of vacuum upon gas producing wells.

While the effect of vacuum in any field is toward an increase in production of oil, low boiling point oil fields must be handled different from high boiling oil fields. For that reason, this article will treat only of fields producing low boiling point or volatile oil.

Physical Composition

Perhaps an outline of fundamental physics of gases including air would assist in this analysis. Air is included since it is a gas, and an appreciable amount of air is handled through gasoline plant systems.

Gases display perfect elacticity, or resistance to compression or extension, and power to regain its form or bulk when the pressure or tension is withdrawn. And, further, gases possess a tendency to expand into a greater space as the pressure or tension is reduced, in consequence of repulsion between molecules. This is exhibited in the increasing rarefaction of the atmosphere in ascending from the surface of the earth.

The atmosphere, like all other bodies, gravitates toward the earth and consequently has pressure and weight. The pressure or tension is measured by mercury or water columns, manometers, barometers and gauges for indicating pressures below atmosphere.

In gasometry various standards are used such as a mercury column or water and pressure per square inch. Since the actual force exerted by the atmosphere is proportional to gravity attracion, all readings below atmospheric pressure are referred to a common datum plane which is sea level. Another method of setting up readings is to base them upon absolute zero, when 20 inches of mercury of vacuum becomes 10 inches absolute or within 10 inches of absolute zero pressure.

Gauges are made that register absolute pressures, read directly, without reference to barometric pressure. In fields of some altitude this type of gauge affords exact readings from the mercury column and is not affected at any altitude or in any weather by changes in barometric pressure.

The normal unit of pressure, English system, is 14.7 pounds per square inch, corresponding to 29.922 inches of mercury in the latitude of Paris; various latitudes show a slight variation.

When the mercury column reads 20 inches, the pressure in pounds of the atmosphere would be:

$$\frac{H}{29.922} = \frac{p}{14.7}$$

$$H = 2.0355$$

and $$p = 0.4915\ H \text{ lb.}$$

Then: $$p = 0.4913 \times 20 = 9.826 \text{ lbs.}$$

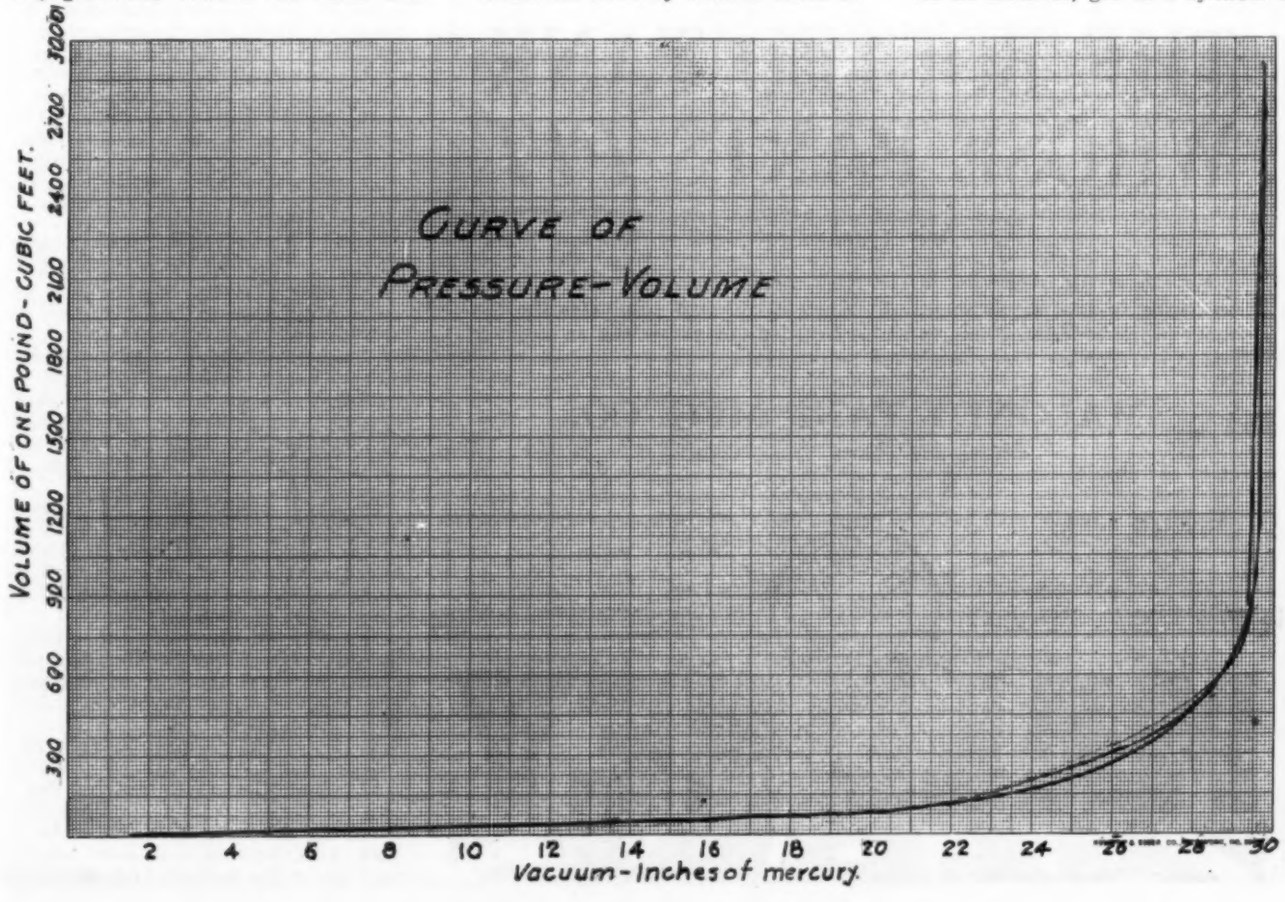
The result, 9.826 pounds is, therefore the pressure above absolute zero of pressure. From this, we can see that the pressures with which we deal below atmosphere are very small and, considered in the light of pressure alone, upon solids or liquids, little force is present.

Since 14.7 pounds is the pressure above absolute zero, 161.7 pounds absolute pressure would be 150 pounds gauge, which is eleven atmospheres above absolute zero.

The first law of the relation between tension and density of gases was discovered by direct experiment upon gases by Boyle, and more accurately performed by Mariotte, consequently is termed Boyle's or Mariotte's Law. It asserts that if the temperature be constant, the volume, the column of gas (perfect) varies inversely as the pressure. That is, by doubling the pressure, the volume is halved and trebling the pressure, volume is reduced to one third.

Then $P \times V = C =$ constant.

As an instance, gas in a cylinder 24



inches long open to atmosphere is at an absolute pressure of 14.7 pounds per square inch. When the piston is depressed 12 inches, the pressure is:

24—12=12.

$\frac{14.7 \times 24}{12} = 29.4$ pounds per square inch, absolute or 14.7 pounds above atmosphere.

The temperature of gases has an important effect upon the density and tension of gases. Discovered by Charles, published by Dalton and independently by Gas-Lussac, the physical law covering may be stated as follows:

A gas under constant pressure expands by a definite fraction of its volume at 32 F. for a given increase of temperature, or, for the same density the tensions, the volume of one and the same quanity of gas increases with the temperature.

An average value of many experimenters is that the expansion of a gas between 32 F. and 212 F. is 0.3665 of its volume at 32 F. This value varies considerably in liquifiable gases, however, since the density of such gases increases when the liquifaction point is neared, and this article deals for the most part with this class of gases.

Gases combine, according to Gay-Lussac, in very simple relation by volume, and Avogadro's Hypothesis, generally accepted by physicists and chemists, that, "Equal volumes of all the gases, elementary and compound, under the same conditions of temperature and pressure, contain the same number of particles or integrant molecules.

Since gases expand upon reduction of pressure, a study of the effect of expansion is here included. When a gas is expanded and its temperature is maintained, the expansion is termed isothermal, represented by a line showing relation between volume and pressure with constant temperature.

And, during expansion (or compression) when a gas neither receives nor rejects heat, then the curve which gives the relation between its volume and pressure is termed an adiabatic curve.

Expanding gas may do work; work is mutually convertible with heat, and, if no heat is supplied to the gas, while heat is being taken from gas doing work, then the gas necessarily cools in exact proportion to the work done. This has an important effect upon temperature in oil and gas sands.

A distinction should be made here, covering free expansion. Joule immersed two vessels connected by a pipe in a vessel of water, one of the vessels was filled with air at 22 atmospheres and the other exhausted of air. Opening a stop cock, air rushed from one vessel into the other, but no apparent change of temperature was observed. Hence Joule's Law, "When a gas expands without doing external work, and without taking in or giving out heat, its temperature does not change." Expanders depend upon this principle.

Now, applying the foregoing notes on physical chemistry to wells.

Practical Application

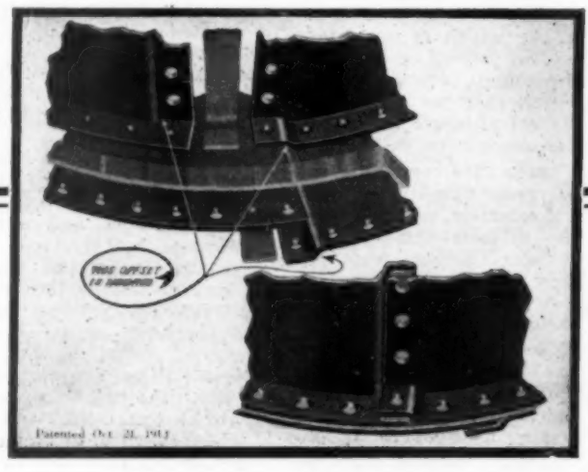
When the well flows during initial production, usually such flow is caused by pressure upon the sand from water below or on the sides. This pressure from water has of course, generated rock pressure in the sand and may have been sufficient to have liquified some of the hydro-carbon gases and dissolved others into the oil, and, when pressure is released, some of the gases so liquified and dissolved are converted into gas again. It is certain that some of the lighter gases do come out of the oil upon reduction of pressure. Many observations in the field point to this, although several authorities assert that vacuum or reduced pressure has no material effect upon oil.

A tank of freshly run crude of 105 F. initial boiling point, from a large flowing well, making large volumes of gas, was cut off from the flow line and the bubbles removed from the top. The oil level in this tank subsided ¾ inch in two hours, with no leaks and the tank held 2½ barrels per inch, about. Many pipe lines have a rule that tanks will not be run until 24 hours after being cut off from the flow line for this reason.

In wells making "live oil" that is, oil of low boiling point, with much gas, a bailer picking up oil from the bottom under a column of such oil, will not emerge full, due to expansion of gas coming out of such oil.

By way of diversion, the boiling point of oil in the Engler apparatus does not reflect the true boiling point, and the difference may upset calculations on tension.

It seems that oil must be agitated to relieve gases. Oil pumped from one tank to another loses gravity due to loss of lighter fractions. Flow lines dropping oil from a height into the tank, as compared with lines terminating under the surface of oil, retain light



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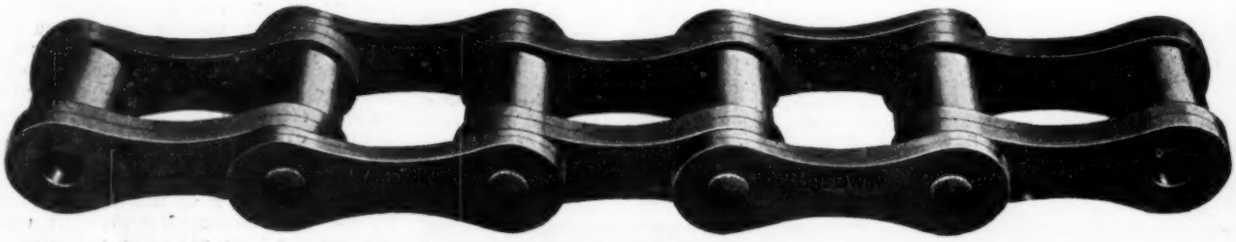

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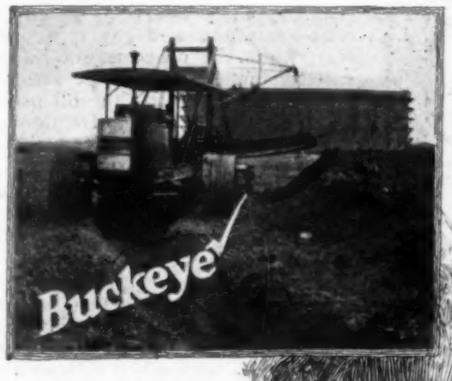

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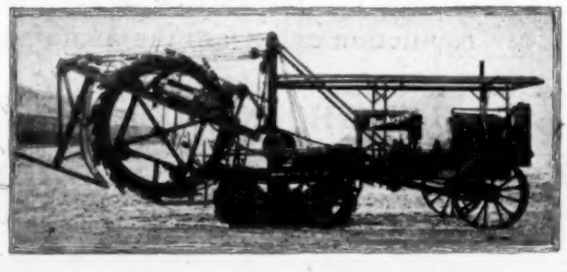

fractions. Gasoline, shaken in an open container, evolves gas and lowers the gravity.

Vacua applied to low boiling point oil evolves gas. The old type of gasoline engine, without carburetor, received gas evolved from the surface of light gasoline.

Pumps handling light oil under pressure in pipe line work have never been fitted with simple air (or gas) chambers for cushioning, because air or gas in such chambers dissolves or liqifies into such chambers dissolve or liquifies into Air pumps to supply such chambers must have considerable displacement to maintain a cushion.

That gas is evolved at the surface or within the body of oil depends upon whether such gas is liquified or held in solution. Surface tension as against tension at the bottom of a column of oil evolves more gas upon reduction of tension and gases so evolved are heavier.

The many phenomena observed above ground, as set out above, and there are many more, have a bearing upon what occurs in a sand below ground.

When the well flows during initial production, usually such flow is caused by pressure upon the sand from water below or on the sides. This pressure may have been sufficient to have condensed some of the gases into liquid with the oil and to have dissolved others with the oil and, when the pressure is reduced, some of the gases so held in the oil and evolved. That this occurs is certain.

As oil containing gas, traveling up the casing, nears the surface, the volume of gas increases due to expansion from pressure reduction. Gases so evolved and expanded necessarily occupied a smaller volume at the bottom of the well. Flowing wells differ materially in gasoline content of the gas, part of which may be traced to this phenomena of pressure reduction. Since vaporization out of solution and out of liquifaction is proportional to pressure, if such a well has such volume of oil and gas flow, coupled with size of casing, that the entrained gas exerts buoyancy and frictional contact as well as impact with the oil sufficient to lift the pressure of the entire column of oil off the sand, the gasoline content of the gas is naturally greater than the gas from a well in which gas is maintained under pressure due to incomplete lifting of the column of oil by the gas, maintaining pressure upon the sand, which prevents evolution of gas lower in the series. And, oil from the first well will have a lower initial boiling point than oil from the second well, both wells in the sand near one another.

Why Large Variation

The writer believes that he has definitely established the foregoing while attempting to find the reason for widely varying gasoline content of gas from adjacent wells in the same sand.

Pressure does vary we know. An analogy may be had in the air lift for blowing wells. When the oil level stands at the same level in two wells of the same depth, both will start against the same air pressure but one will invariably run at a different pressure from the other, due to quantity of oil and gas produced. If the quantity of oil produced from one well is such that the proportions of oil, air and eduction pipes, and gas is about correct, while the other is not, the latter will run under a higher or lower pressure, depending upon the oil produced. Excepting liquifiable fractions, the point is the same in the two cases.

In testing casinghead gas for gasoline content, there is some explanation of the wide variation between adjacent wells, and the foregoing, I believe, explains a part of the variation.

As the pressure of gas forces oil and gas to the well bore, then lifts oil out of the well by pressure, buoyancy of gas, frictional contact and impact of gas bubbles with oil, it follows that velocity in the sand is proportional also.

Every sand, loose sand or sand rock, is composed of large and small grains, silt or cementitious material as shown by microphotographs in an article by the writer published in The OIL WEEKLY of October 27, 1923. As shown by the article referred to, the small particles have a tendency to migrate through the interstices of the larger particles. Consequently, to open a sand up by removing such fine particles, a well would be allowed to flow at capacity after first bringing in, until oil so produced shows no fine sand or silt whatever, when the sand may then be said to be opened up. Producers of long experience aver that the first well opens up passages to such well, allowing a free flow to such first well of the field, and that an offset well, drilled in later, has not as much initial or settled

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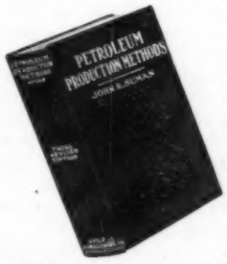

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production due to this cause. The writer has found this to be true and, if means were taken to open the pore spaces around every well and keep them open, greater total recovery would result.

Since gas is perfectly elastic, a reduction of pressure caused by opening the sand to the atmosphere through the well bore, naturally causes a rush of gas through the sand to the well. Further reduction of pressure, in a pumping well, causes a rise in this velocity, due to the large volume of the same quantity of gas. The writer has found that this increase in velocity causes further sand particles to migrate to the well, and we know that cleaning the sand assists production immediately and ultimately, so that this standpoint, although vacua may pull in sand, such sand should be pulled in and gotten out of the way so that further oil may flow into the well more easily.

Since gas, expanding but doing no work, would cause no reduction in temperature in the sand, but sand temperatures do reduce, the gas evolved evidently does work, through, a priori, we cannot prove it except by analogy. Gas forces oil to the well bore against pressure and friction of oil and the gas itself against the surfaces of the sand grains; thereby doing work, resulting in lowering temperature of the oil in the sand and of the sand body itself.

Since the volume of gas varies directly as the pressure, when pressure is reduced, velocity increases causing higher velocity through the sand. The volume of one pound of air, (gas) at 14.7 pounds absolute, or atmospheric pressure at sea level is 26.79 cubic feet; at 10 pounds absolute, or 9.56 inches of vacuum, the volume increases to 38.38 cubic feet and at 5 pounds absolute, or 19.74 inches vacuum, volume increases to 73.33 cubic feet, while at 1 pound absolute, or 27.88 inches vacuum, the volume is 333 cubic feet. A curve showing the pressure-volume relation graphically is printed herewith, indicating that velocity increases enormously when vacuum approaches absolute zero of pressure.

The flow of fluids, liquid or gas, according to the laws of friction are:

Independent of pressure between the fluids in contact;

Directly proportional to the surface areas in contact;

Proportional to the density of the fluid;

Dependent upon viscosity, although this relation is not definite;

Proportional to the square of the relative velocity at medium to high speeds, and to the velocity at low speeds.

Vacuum is applied only to pumping wells, however, and where the sand has become partially denuded of oil, or partially saturated due to withdrawal, high velocity carries oil to the well bore by impact and by frictional contact.

As before, when vacuum is applied to a well suddenly, sand, fine particles, will migrate to the well and it may sand up, resulting temporarily in a loss of production, but affording more oil eventually. The well may cave, allowing some of the sand body to fall into the well. This may also result in a temporary loss of production, but, since a new sand face is exposed, production should not show a net loss in this case either.

In fields producing oil of very low tion as outlined before. Before the advent of vapor proof tanks, these fractions were largely lost, unless the gasoline plant took them beforehand through gathering lines. Many plants connect gathering lines to the tanks, as well as the well, to take in these gas fractions from the tanks.

Fields producing high gravity, low boiling point initially, show that gravity has been reduced and the boiling point raised, due in part to extraction of some of the lighter fractions by vacuum. This is of benefit to the producer in the additional yield of gasoline and of detriment in the reduction initial boiling point, a reduction of pressure releases fractions from solu- of gravity. Just what proportion of gravity reduction is due to vacuum is problematical, however. Early production in a field is from the top, top oil, naturally, and later production from the bottom part of the sand. The lower part of a sand seems to produce oil with a higher tar and paraffin content than the upper, and gravity would therefore be somewhat lower due to this cause. But, at the same time, a lowering of the boiling point indicates that a part of the reduction is due to releasing some of the lighter fractions.

When a sand pore is evacuated of oil, something must occupy the same

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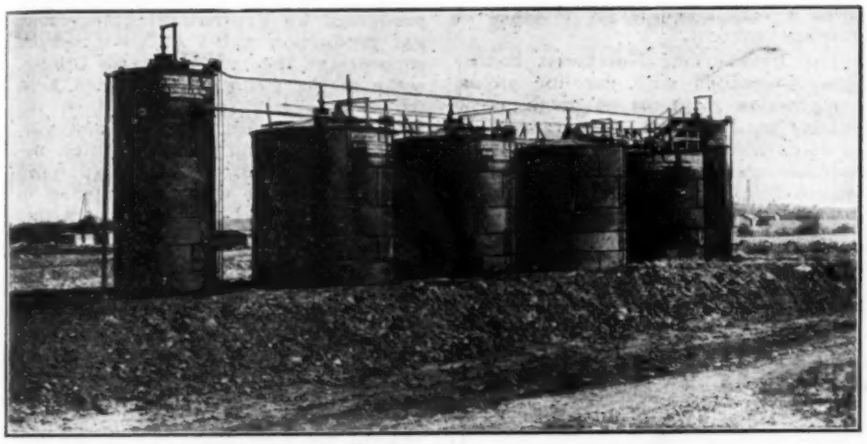

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pore space. If gas from another place fills this pore space, displacing the oil, and allowing the oil to travel toward the well bore, that much more oil is recovered. If the oil within a pore space gives up enough gas itself to fill the pore space, then the oil may migrate to the well bore. A reduction of pressure releases gas, consequently, vacuum, applied to the sand produces gas to fill the pores and assist in production in this manner.

The quantity of gas so produced exceeds the volume necessary to fill the pore space, especially under high vacua and the excess gas goes to the gasoline plant.

The gasoline content of casinghead gas increases not so much with the age of the field as with the two factors:

Evacuation of the sand, exposing more oil surface and oil covered sand surface within the pores to the effect of reduced pressure;

A great reduction in pressure.

Fields gradually evacuated under low vacuum show a gradual increase in gasoline content of gas, while fields rapidly evacuated of oil by intensive drilling, and placed under high vacuum, show a very much larger increase of gasoline content.

The Burkburnett Northwest Extension is credited with gasoline yields, compression plant, of as much as 20 gallons per thousand feet with vacuum of 24 to 26 inches; while an adjoining field, several years older, is credited with 6 gallons per thousand, produced by gradual evacuation and low vacuum.

The writer believes that this situation proves that vacuum carried high vaporizes out of solution progressively higher boiling fractions, since oil from the high vacuum field has a higher boiling point, and a greater rise in boiling point, than oil from the low vacuum field, although the boiling point of both oils was almost the same during initial production.

An old well in a non-vacuum field, producing no gas naturally, increases gas production under vacuum further supporting the above. Of course, some of the gas may have been held within the pore spaces and then released by pressure reduction and volume increase, but the quantities secured continuously, after applying vacuum, coupled with an increase in boiling point of the oil, still bears this point out.

Oil, held within a pore space by capillarity, beyond question is forced out of the pore space when pressure is reduced and gas is so evolved because the gas will rise to the top of the pore space, or to a cover in another pore space and force the oil out in the direction of reduced pressure which is toward the well bore. These are minute, to be sure, but all oil is divided and held in minute spaces and a study of the situation must be necessarily of conditions as found.

Oil held in sand by adhesion also may be forced toward the reduced pressure area, the well bore, by gas velocity, as may be shown experimentally by blowing gas through sand. And because this depends upon frictional contact of gas with the oil, and friction increases as the square of velocity, gas rarefied by pressure reduction exerts a greater force upon the oil toward the lower pressure area—the well bore. Density of gas, lower density, reduces friction, however. In steam turbine work, it has been shown that wheels revolving under pressure require more power than wheels revolving under vacuum, so that, in wells, the maximum realization of this is with gas of the most density.

Sands of small pore space—sandy lime fields—give up gas more slowly than more open sands and a general reduction of rock pressure is slower, so that the effect of vacuum is not as quickly secured in sandy lime or tight sands.

The yield of gasoline then, from a tight sand does not increase as rapidly as the yield from an open sand field, both producing oil of the same general characteristics.

As a general statement, vacuum should assist in a greater ultimate oil recovery in tight sands than loose sands, since the tight or low pore space sands, with smaller capillaries, tend to retain oil more than sands with larger pore spaces.

In fields with bottom water, the producer may fear that vacuum increases water and lowers production thereby.

In thin sands, three or four feet thick, this may be true to some extent, when vacuum is not properly applied, but not to the extent that is usually imagined. Pressures below atmosphere are so small compared to pressures above atmosphere that the movement of water upward is not due to

(Continued on page 62)

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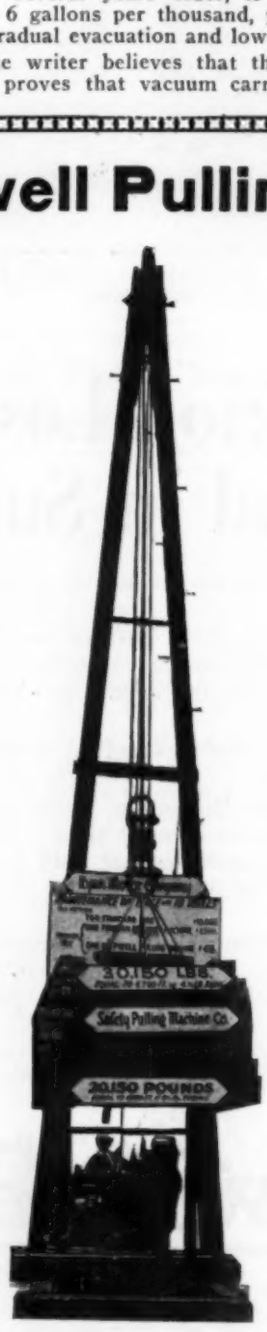

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The Mud Problem in Rotary Drilling

A review of operating practices shows many kinds of material and methods used

The following article concludes the discussion on Mudding problems started in the June 21 issue.—The Editor.

By R. E. Collom

*Former State Oil and Gas Supervisor, California**

THE viscosity of mud fluids depends to a large extent upon the proportion and condition of clay colloids present in the fluid. The colloids have the ability to remain in suspension in a liquid. This is due to the small electric charge carried by each particle. The addition of certain chemicals, electrolytes, to the colloidal fluid increases the electric charges per particle and, because each particle bears a similar charge and therefore repels every other particle, causes deflocculation. Addition of other chemicals neutralizes or dispels the electric charge and the small particles flocculate or unite into larger groups.

As applied to mud fluid used in oil wells a study of colloids is important for several reasons:

1. The viscosity of the mud fluid can be altered, by changing its colloidal state, without materially changing its weight or specific gravity.

2. A change in the proportion of colloids of a mud fluid—without change in its specific gravity—means a change in its penetrating and formation sealing ability.

3. Various colloids have marked influence—one upon another. Oil has colloidal properties as well as the mud fluid which comes in contact with it in an oil sand.

The use of hydraulic lime with mud fluid is an example of the common use of a reagent to alter the colloidal condition of mud fluid. Hydraulic lime causes coagulation of the mud fluid. The colloidal clay particles combine into larger groups and thus the mud fluid is in a condition to clog fractures and crevices more rapidly. This is the only condition for which the use of hydraulic lime with mud fluid is beneficial. Hydraulic lime produces a poor drilling mud, and when it is used in mud to restore circulation the mud containing it should be circulated out of the hole and not used any more.

In the rotary drilling at Huntington Beach a lime mud—the by-product of a local sugar factory—is used quite successfully to restore lost circulation. The lime mud is of colloidal texture and very plastic or sticky.

The mud is used considerably in spudding-in, as it is adhesive and will rapidly seal the upper porous strata. It is, however, lighter in weight than ordinary clay mud and can not be used in holes where there is danger from gas blow-outs. It is free from grit and therefore easier on pumps than the sand burdened clay mud.

The lime mud is difficult to mix, as it tends to ball up in the hole. This is especially true in drilling in a sand formation where the sand has a tendency to stick in the mud and make drilling difficult. It is necessary to mix it in a box with live steam. When mixed with shale mud the stickiness is dissipated. This is probably due to the flocculating action of the lime upon the natural clay colloids of the shale mud.

One operator stated that the lime mud should not be used where oil showings are expected, as it is impossible to obtain ditch showings with this mud. In well No. "Huntington B" 3 of Standard Oil Company, section 2, township 6 south, range 11 west, S. B. B. and M., after obtaining a water shut-off at 2580 feet, sugar factory mud was used in drilling into the oil zone because of scarcity of ordinary mud. No ditch showings were obtained, although formation samples indicated that the oil zone had been entered. It was finally necessary to wash the hole and use ordinary shale mud in order to obtain showings on the ditch.

The above is a good example of the rapid sealing properties of this plastic material. This action is further illustrated in the following example: In well No. "Huntington B" 7 of Standard Oil Company, section 12, township 6 south, range 11 west, S. B. B. and M., with the hole drilled to 3046 feet, 580 feet of drill pipe was twisted off. Caving hole caused great difficulty in fishing for the lost drill pipe. New sugar factory lime refuse was mixed and the hole thoroughly mudded through drill pipe. After this mudding no further caving occurred. In another well, in drilling in loose formations at 500 feet, circulation was entirely lost. Sawdust was shoveled into the hole without avail, but finally by shoveling sugar factory lime refuse into the hole formations were sealed and circulation was obtained.

Use of Heavy Minerals

Stroud[1] reports the successful use of iron oxide as a drilling mud, and also when mixed with ordinary drilling mud, in the oil and gas fields of Louisiana.

It is probable that the success of the iron oxide fluid in killing high pressure gas is partly due to its high hydrostatic pressure and partly due to the fact that the iron oxide is finely divided, behaves as a colloid, and has good sand sealing properties.

In a personal communication to the writer from Ben K. Stroud, supervisor of minerals division, Louisiana department of conservation, the following details of the successful use of iron oxide are given:

"Since writing this paper,[2] we have had occasion to use iron oxide in a well in the Monroe gas field. At 500 feet this well encountered a very heavy flow of fresh artesian water, together with about 250 pounds gas pressure, which accumulated in this sand from the old Smith No. 2 crater. Different means of controlling this flow were tried. First of all, a wagon load of hay was mixed with mud and pumped into the well, after which 30 or 40 loads of sawdust were mixed up and forced down.

"At the time that I visited the well it was still out of control and I suggested the use of empty cement bags. Twenty-five hundred empty cement bags were pumped into the well, and these together with the heaviest mud that could be made were successful in bridging up the sand to such an extent that a pressure could be built up. The minute the pressure was released, however, the flow would start again and there was no way of holding it down. The owners of this well spent nearly two months in trying to control this flow.

"The Texas Company had, in the meantime, hauled a car load of iron oxide to a nearby well where they planned to use it in going through the Monroe gas rock. This car load was borrowed from The Texas Company and hauled over to the well. A 20 pound per gallon mixture was easily obtained but was found too thick to pump. The mixture was then thinned down to seventeen pounds per gallon and forced into the well. After holding pressure on the well for a few minutes pressure was released and it was found that the flow was absolutely killed. After drilling through this stratum the owners of the well pumped out and salvaged about 80 per cent of the iron oxide and they now have it near this well in pits ready for the next job. The well has subsequently been drilled to the Annona chalk and is a successful gas producer."

Stroud writes further relative to the use of iron oxide as reported by the manager of Southwestern Gas and Electric Company in the Bethany field, as follows:

"For your information I am quoting copy of report in connection with the use of iron oxide, this experiment having been made by the Southwestern Gas and Electric Company. Mr. Curtis, manager of the company, advises me that this material is just what they need in controlling the gas pressure in the Bethany field and that from now on they will use it quite generally."

" 'The following is a statement of results I have obtained in the use of iron oxide mud:

On Gully No. 2, 200 cubic feet of 15 pound mud, the following constituency per gallon, was mixed:

8.33 pounds water.

5.6 pounds iron oxide.

.07 clay pounds. Resulting at 2700 feet in a pressure of 2100 pounds per inch.

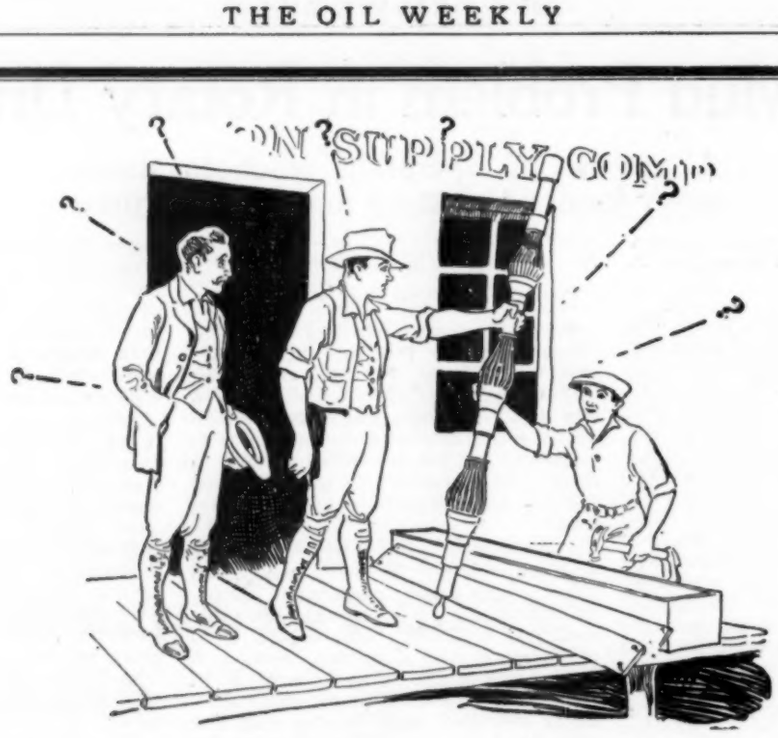
This mixture was found to be very fluid and easily handled by the pumps, the suctions of which had a five pound lift. It was found, however, that the iron oxide settled out of the mixture very rapidly. Too rapidly, in fact, to

*Reprinted from the Bulletin of the California State Mining Bureau.

[1]Case, J. B., Notes on the use of core barrels with rotary tools. Summary of Operations, California Oil Fields, Cal. State Min. Bureau, Vol. 7, No. 9, pp. 5-7. March, 1922.

[1]Stroud, B. K., op. cit.

[2]Stroud, B. K., op. cit.



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be a good drilling mud. A mixture of equal parts in volume of water and iron oxide raises the volume of water about .2. Experiment showed that a mixture of water, clay and iron oxide, wherein the clay and iron oxide are in the proportions of one to four, does not settle out too rapidly and in mixtures in water up to about 15 pounds per gallon is sufficiently fluid for ordinary use, making an excellent drilling mud. This preparation gives maximum weight to a very fluid mud.

On Werner No. 3, 800 cubic feet of 10.5 pounds of the following constituency per gallon was mixed:

8.33 pounds water.

1.69 pounds iron oxide.

.48 pounds clay mud.

Result at 2590 feet, 1400 pound pressure to square inch. This mud was very fluid and easily handled by the pumps. With it we drilled through at least 15 feet of gas sand, pulled tools out of the hole, strung up the bailer and ran the bailer twice before any indications of gas were apparent. Four and one-half hours elapsed from time drilling was stopped until gas showed up. This well, after running bailer twice, blew in at about 50,000,000 volume and 1200 pound rock pressure.

It seems that iron oxide, because of its finer grain, has greater penetration properties than clay and results in a closer mud; one which the gas has greater difficulty in breaking through. A heavy mixture of oxide and water should make an ideal mud for shutting off water flows or killing gas wells.' "

Penetration into Porous Strata

It is not an uncommon occurrence, during the process of drilling with rotary, for the mud stream to pass off into openings in underground formations instead of returning to the surface. This is called losing circulation. Losing circulation is an extreme example of the penetration of mud into formations. It is conceivable that circulation can be partly "lost", that is a fractional part of the mud stream can be penetrating formations and the remainder returning to the surface. This is probably the condition where measurable quantities of mud are being lost during the process of circulating rotary mud to seal formations to be left back of a cemented string of casing. As has already been noted, in the discussion of colloidal properties of mud fluid, a change in the nature of the mud will frequently cause a radical change in penetration. Lost circulation can be restored by the addition of small quantities of hydraulic lime or cement, making a kind of mud favorable for minimum penetration.

It is probable that, as regards penetration, the physical nature of the mud fluid is as important a consideration as the porosity of underground formations.

The subject of penetration is discussed in considerable detail in Chapter V of the committee report on the use of mud fluid for preventing infiltration of water in oil and gas wells, which is published in these pages. Ample field observations show that mud fluid penetrates strata for a considerable distance underground, even appearing in adjoining wells. This fact is of greater importance than a detailed determination of the nature of the strata that mud will or will not penetrate.

Laboratory experiments are conflicting as to the extent that mud fluid will penetrate sand formations of uniform porosity. In a drill hole it is probable that a certain amount of colloidal clay filters into the interstices of sand strata and changes the sand into a sandy shale for a short distance into the wall of the hole. Continuous infiltration will cause particles of clay to be deposited in the interstices of the porous formation and finally to form an arch of filter packed material which will set up an appreciable resistance to pressures exerted radically toward the center of the hole. Also, during filtration, water passes out of the mud fluid and a sheath of clay mud is built on the wall of the hole opposite porous strata. It is probable that very little clay is deposited by the process of infiltration on the exposed faces of shale strata even after prolonged circulation. The hole is larger in diameter opposite soft sand strata than opposite shale and is probably kept to a more or less uniform diameter by the deposition of thick mud or clay opposite the more porous and, at the same time, larger diameter formations. The principal difficulty of introducing casing into a rotary hole is due to the accumulation of clay mud on the walls of the hole opposite the porous strata.

Penetration will be governed by the following:

(a) Nature of openings or porosity of formations.

(b) Effective hydrostatic pressure of fluid on formations.

(c) Hydrostatic or rock pressure of native fluids in formations.

(d) Diameter of hole, filter area.

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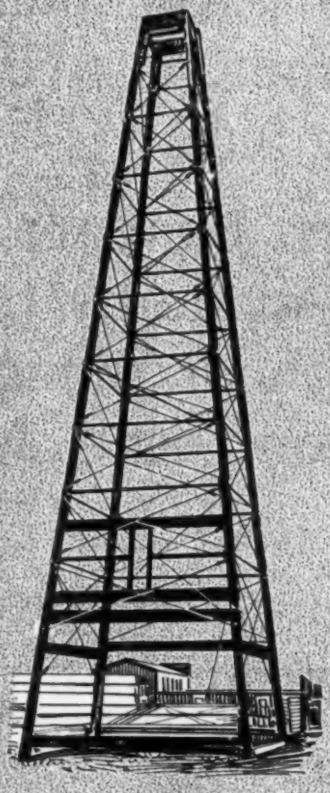

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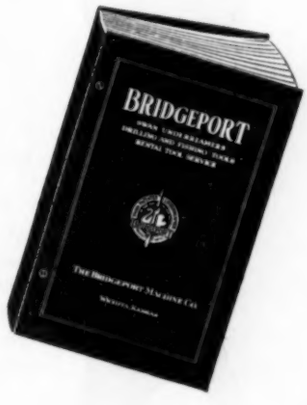

THE BRIDGEPORT MACHINE COMPANY

General Offices & Works WICHITA, KANSAS

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(e) Amount of depletion of oil or gas sands.

(f) Amount of pressure reduction in an oil sand brought about by pumping adjoining wells.

(g) Physical characteristics of mud fluid.

(h) Kind of native fluids—oil, gas or water in formations.

Considering the forceful effect that capillarity and changes in the colloidal state can exert upon various fluids, in the proper field, it is evident that much is yet to be learned relative to the action of mud fluid in a drilling well.

All other things being equal, as regards pressures, porosities and other penetration factors, one of the unanswered questions deserving of experiment and observation is, will there be any difference in the amount of penetration or ability to penetrate formations containing, respectively, oil, gas or water.

Pump Pressure Applied to Mud Fluid

It is frequently necessary when drilling through high pressure gas or flowing water strata to stop drilling and mud the hole under extra pump pressure for a while in order to control either gas or water. Where high pressure gas is active a considerable part of a column of mud fluid can become gas cut, thus reducing its hydrostatic value, without any evidence of such condition at the surface until accumulated gas pressure throws the mud out of the hole.

Objections are often made to the use of pump pressure in mudding on the ground that such additional pressure will serve to break down the wall of the hole. Applied pump pressure should be considered as to its beneficial or detrimental effects, in terms of added hydrostatic pressure for a given column of fluid.

When mudding off gas or any other formation additional pressure can be applied to the sand in two ways, namely:

1. By increasing the thickness or density of the mud fluid, and hence its weight per gallon, or its hydrostatic pressure.

2. By applying pump pressure to the mud column without changing the weight per gallon, or specific gravity, of the mud fluid.

There should be no valid objections to the application of pump pressures, which, if interpreted in terms of hydrostatic pressures for a given depth, are no greater than the increment of hydrostatic pressures produced by increasing specific gravities within the working range for mud fluids. Thus at depths of 2500 feet the application of 100 pounds pump pressure to the fluid column is the same as increasing the specific gravity of the mud fluid column by one-tenth of a unit or the hydrostatic equivalent of changing from mud of say 1.1 specific gravity to 1.2 specific gravity. See figure 2.

If pump pressure under the above condition causes marked increase in loss of mud this should properly be interpreted as evidence of a weak spot in the mudded wall which should be strengthened by additional mudding.

The danger of a mud fluid becoming gas cut, and its attendant inability to control gas, has already been mentioned. Thick mud will be more easily gas cut than thin mud. On the other hand as much weight of fluid as possible is desirable which, if hydrostatic pressure alone is to be used, can only be attained with the mud that is most readily subject to aeration by gas. It would seem to be better practice to use a thin mud and make up for the deficiency in weight by putting on pump pressure.

At the conclusion of pressure mudding operations pressures should be gradually released. Sudden release of pressure does not give time for fluids to move and make necessary equalizing adjustments. It has the same effect as if 400 or 500 feet of mud fluid were suddenly swabbed or bailed out of the hole.

Study Mud Fluid and Cement For Lining Oil and Gas Wells

Bartlesville, Okla., June 30.—In a general study of the properties of mud fluid and cement for oil and gas well use, being made by Interior Department engineers at the petroleum experiment station of the Bureau of Mines, Bartlesville, Okla., tests have been conducted to determine the rates at which water and oils of different gravities under different pressures would pass through a sandstone plug six inches long and three inches in diameter. The rate of flow, or penetration, of fluids of different types and gravities into sands of various porosities is of great importance in determining methods for effectively mudding off gas or water bearing sand for the purpose of conserving the gas or excluding the water.

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FIELD NOTES AND PRODUCTION STATISTICS

Operators Ignored Production Menace

Despite warnings, drilling has continued mounting output up to time of proration of runs; many permits issued

By W. Lee S'oan

Tulsa, Okla., July 2.—Although production continues on the upward trend in the state of Oklahoma, operators throughout the state have continued to follow the identical program outlined months ago, despite the fact that the major companies and the corporation commission of the state have repeatedly warned them against an overproduction. What proration of runs will accomplish is due for immediate demonstration.

Seventy-nine permits to drill were reported the past week, most of which will be drilled by independent companies and individuals, the major companies having curtailed their drilling programs to a minimum in an effort to right the situation.

Production figures for the past week in the major pools are given as follows:

Burbank, 92,873 barrels from 1515 wells, the Osage County side contribution being 70,741 barrels from 1329 wells and the remainder coming from the Kay County extension. This is a decrease of 408 barrels under the previous week, with an increase of nine new wells.

Tonkawa, producing 36,924 barrels from 672 wells, an increase of 648 barrels from the same number of wells as reported last week.

Cromwell pool in Seminole County is producing 28,977 barrels every 24 hours from 29 wells, showing an increase of 566 barrels and one well.

Stroud pool reports 22,945 barrels per day from 21 wells, an increase over the previous week of 1874 barrels and three new wells.

At Wewoka the production is given as 8097 barrels from 63 wells, while the Wetumka area, including the Papoose and Gilcrease pools, has 21 wells producing 5672 barrels per day.

Cromwell.

In the Cromwell pool the Gypsy Oil Company has upward of 10,000 barrels per day production from its Stidham lease on which there are six producing wells. The lease comprises 80 acres. No. 4 Pearlie Stidham of the Gypsy company, in the northwest corner of the northwest of section 15-10-8, has been drilled 22 feet in the sand found at 3494 feet and it was producing 150 barrels per hour at the time of the last report. The total depth of the well is now 3516 feet. Th initial production of the well, given after drilling two feet in, was only 200 barrels per day. Gypsy Oil Company's No. 2 Stidham, in the southeast of the northwest of the southwest of section 15-10-8, is producing 150 barrels per hour from a total depth of 3515 feet, while No. 1 Willis, in the southwest of the northwest of the northwest of section 15-10-8 has a heavy gas flow at 3460 feet.

Other new additions to the Cromwell pool include the Mid-Kansas Oil and Gas Company No. 2 Jenkins, in the southeast of the northwest of the northwest of section 15-10-8, making 35 barrels per hour from a sand found at 3446 and drilled 40 feet in. The Berry Petroleum Company No. 1 Yarhola, in the center of the northwest of the northwest of the northeast of section 22-10-8, made 475 barrels during the first 12 hours from the sand at 3434 feet. The McMan Oil Company No. 4, in the northwest corner of the southwest of the northwest of section 22-10-8, flowed 60 barrels per hour from 3412-45 feet. The Independent Oil and Gas Company No. 1 Harjo, in the southeast of the northwest of the northeast of section 21-10-8 is producing 450 barrels daily from a total depth of 3568 feet and the H. F. Wilcox Oil and Gas Company No. 6 Bruner of the southwest of section 15-10-8 is making considerable gas from a total depth of 3355 feet, at which depth a fishing job is in progress.

Tulsa, Okla., July 1.—Barnsdall Oil Corporation's No. 16, in the northwest quarter of section 32-21-12, Bird Creek District, is today making 4800 barrels of oil of which two-thirds is gasoline. The oil testing 50 gravity.

Extending the Bruner pool just outside of Tulsa, Thompson and Black have a well producing 100 barrels an hour from the sand at 1984 feet. The well is located in the northwest corner of the southwest of the southwest of section 5-19-12, three-quarters of a mile west of the Vern Station pool, and the farthest east well of the Bruner field.

Stroud

The Waite Phillips Company No. 2 in the southwest corner of the northwest of the northwest of section 7-14-7, Stroud, has been agitated and it is now the largest producer of the field, making 2630 barrels daily. The well log shows a total depth of 4125 feet and still drilling a little deeper.

J. A. Hull's No. 5, in the northwest of section 12-14-6, also in the Stroud pool, is producing 960 barrels from a sand topped at 4115 feet and still drilling in the sand by the 4160-foot mark. Roxana Petroleum Company's No. 2 Zollers has been drilled to a total depth of 4125 feet and it is now producing 715 barrels daily.

A wildcat well in Lincoln County, being drilled by Flynn & Morgan in section 34-15-5, found a good show of oil and two million feet of gas in the Bartlesville sand at 1685 feet. The well is now drilling to the Wilcox sand, but in the event production is not found in that pay the well will be plugged back to the show.

In Osage County, near Pawhuska, the Mid-Kansas Oil and Gas Company has a well making 65 barrels per hour with the sand barely touched at 2684 feet. Location is given as the southwest corner of section 21-25-8, one and one-half miles northwest of the Atlantic Oil Producing Company's big producer completed some time ago. The oil from the well is testing 43 gravity.

Seminole County

The Wewoka pool of Seminole County has been extended by the Boggs Oil Corporation, when a thousand barrel well was completed more than a quarter of a mile west of the nearest producer. No. 1 Casey, the producer, is located in the northeast corner of the northeast of of the southeast of the northeast of section 31-8-8. The sand was topped at 3173 feet and drilled into three and one-half feet, which means that it will possibly be Wewoka's largest well.

The Cumberland Oil Company No. 1 Harris, in the northeast of the northwest of the northwest of section 27-15-10, in the Slick district of Creek County, is producing 300 barrels of oil per day after being shot with 55 quarts. The initial production of the well, gauged before the shot, was given as 155 barrels of 29 gravity oil.

Creek County

Lorraine Petroleum Company completed a 150-barrel producer in the Dutcher sand found at 3120 feet in their well in the northwest of the northeast of section 23-16-8, Creek County. Four other wells are on top of the Dutcher sand near the well and are preparing to drill in.

In the Papoose pool in Northern Hughes County the Papoose Oil Company No. 7 Alexander, in the southeast corner of the southwest of the southeast of section 4-9-9 has drilled five feet in the sand found at 3305 feet and production has run as high as 50 barrels per hour.

Oklahoma Eastern Oil Company deepened an old gas well in the northwest corner of the northeast of the southwest of section 25-13-11, southeast of the McCray pool of Okmulgee County, and it is producing 100 barrels per day from a total depth of 2467 feet.

Average Daily Production for all U. S. Fields

Kansas

	Past Week	Prev. Week
Greenwood	18,170	18 000
Eldorado	16 370	16,320
Elbing and Peabody	8,980	9,000
Fox-Bush	5,485	5,470
Augusta and Douglas	3,280	3 285
Blankenship	3,220	3,215
Florence & Covert	2,630	2,635
Leon and Covert	1,075	1,100
Other fields	15,580	14,600
Totals	74,590	73,625

Oklahoma

Burbank	92,875	93,280
Bristow	56,180	56,000
Osage (outside Burbank)	50,600	51,320
Tonkawa	36,925	36,275
Cushing	25,490	25,580
Okmulgee	25 000	24,500
Stroud	22,945	21,070
Hewitt	20,320	20 200
Cromwell	28,980	28,410
Healdton	14,500	14 490
Duncan and Walters	9,680	9,620
Wewoka	8,100	8,140
Other fields	81,275	80,140
Totals	472,870	469,075

Louisiana

Haynesville	18,380	18,800
Caddo Light	11,375	11,760
Caddo Heavy	1,985	1,985
Homer	7,940	7,940
Bellevue	5,200	5,440
Vinton	5,800	5,665
Bull Bayou	4,900	4,900
Cotton Valley	3,380	6 720
Elm Grocve	1,010	1,000
Evangeline	660	720
Edgerly	600	590
Sarepta	110	70
Anse Le Butte	25	25
Totals	61,365	65,585

California

Los Angels, Cal., June 28.—The daily average production of the California fields the past week, compared with the previous week was about as follows:

	Past Week	Prev. Week
Dominguez	10,200	9,472
Huntington Beach	44,987	46 085
Long Beach	167 265	168 877
Rosecrans	750	741
Santa Fe Springs	62,050	63,160
Torrance	60,259	60 097
Other Fields	283,524	286,130
Total	625,000	631,500

Texas

NORTH-CENTRAL

	Past Week	Prev. Week
Corsicana-Powell	89,295	94,390
Archer County	32,000	32,215
Mexia	32,400	32,625
Electra	21,000	21,050
Stephens County	20 575	20 850
Burkburnett	19,800	19,895
Desdemona-Gorman	7.7 0	7,740
Eastland-Ranger	7,500	7,535
Young County	4,525	4,515
Richland	7,650	4,500
Moran-Shackelford County	3,785	3,935
Currie	2,570	3,200
K-M-A	3,025	2,790
Iowa Park	1,625	1.845
Mitchell County	1,330	1,410
Straw-Palo Pinto County	860	860
Panhandle District	675	680
Reagan County	1,670	450
Petrolia-Clay County	300	305
Brown County	610	610
Coleman County	140	145
Thrall-Williamson County	70	65
Jack County	30	30
Scurry County	15	15
Totals	259,200	261,355

GULF COAST

	Past Week	Prev. Week
Hull	19,700	20,200
West Columbia	11,830	11,800
Orange	11,500	9,900
Goose Creek	10.4.0	10,790
Humble	8 015	7,760
Sour Lake	4,550	4,450
Batson	1,520	1,515
Damon Mound	1,510	1,550
Saratoga	1,480	1,490
Spindle Top	1,000	1,015
Blue Ridge	925	1,230
Markham	375	400
Pierce Junction	365	430
Richmond	250	200
Barbers Hill	180	185
Dayton	150	150
Nacogdoches	110	110
Hockley	25	25
High Island	20	20
Stratton Ridge	..	..
Big Hill	..	..
Totals	73,945	73,220
Total North Texas	259,200	265,355
Luling	33,000	36,000
Mirando	4,200	4,200
Somerset	2,575	2,580
Rockdale-Minerva	565	450
Total Texas	373,485	377,905

Arkansas

Smackover Heavy	102,850	99,865
Smackover Light	36,375	38,355
El Dorado	12.600	13,100
Stephens	2,230	2,280
Totals	154,055	153,600

Frederic A. Delano, federal receiver for the Red River oil lands between Texas and Oklahoma, with headquarters at Washington, arrived in Wichita Falls last Friday to supervise the delivery of various lands and properties involved in the receivership to the Department of Interior on July 1.

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is carried each week by The OIL WEEKLY, and shows daily production average for each state or section. Figures for Oklahoma, Kansas, Texas, Louisiana, Arkansas and Mountain States are compiled by The OIL WEEKLY, while estimates for California and Eastern States are furnished by the American Petroleum Institute.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	†Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyoming-Montana	Calif.	Ark.	U. S. Total
August	726,981	217,208	105,966	323,148	89,998	419,775	97,936	120.750	83,938	375,000	28,834	1,618,765
September	716,107	207,467	107,790	314,932	89,760	418,880	101,857	114,200	80,490	387,000	33,135	1,540,371
October	714,906	200,465	115,130	316,370	90,404	424,037	97,502	116,375	86,412	423,750	34,127	1,489,003
November	711,521	199,223	114,150	388,376	91,098	421,200	93,410	116,375	106,092	450,000	77,225	1,668,776
December	692,702	170,187	111,819	242,010	87,508	415,002	86,513	114,900	108,679	484,000	107 732	1,722,449
January (1923)	708,372	184,885	115,628	304,790	86,720	436,767	81,205	113,500	123,254	517,500	111,920	1,770,645
February	712,007	180,364	96,984	286,493	85,298	446,345	78,068	112,500	110,328	587,500	101, 346	1,805,496
March	720,287	184,582	89,873	283,355	86,012	449,693	75,352	109,900	118,580	653,000	108,630	1,888,522
April	756,381	192,148	92,320	293,780	86,133	478,100	76,854	106,000	127,860	711,250	102,099	1,983,026
May	793,774	203,776	90,905	304,032	85,500	504,498	75,368	109,125	125,680	700,125	109,833	2,010,840
June	824,297	217,162	92,240	320,250	85,255	521,880	72,745	110,300	129,559	773,000	133,592	2,159,818
July	866,665	274,330	91,795	378,335	84,785	508,405	70,085	113,000	137,300	851,000	132,395	2,275,305
August	826,982	278,574	94,398	393,780	82,741	464,416	68,739	112,625	137,909	866,250	123,000	2,251,964
September	830,517	371,730	93,649	443,461	77,078	421 763	68,935	108,400	157,742	85" 700	127,955	2,269,176
October	876,059	408,036	84,120	511,483	71,362	371,657	65,305	107,750	139,912	823,125	125,145	2,240,741
November	935,975	479,383	82,747	580,700	69,337	387,253	64,701	108,125	151,225	768,275	124,188	2,253,806
December	729,591	283,130	78,033	378,478	68,444	378,017	61,138	110,300	146 770	723,845	120,049	1,987,041
January	685,540	243,120	75,085	334,485	67,815	374,605	59,125	108,000	144,735	698,965	114,255	1,900,985
February	729,933	254,180	81,131	362,849	68,183	407,568	59,449	104,500	141,775	675,425	114,726	1,934,476
March	762,684	284,874	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	640,825	128,750	1,943,270
May	763,320	267,475	74 175	374,915	71 490	424,355	60 655	103,800	127 770	640,930	148,630	1,952,545
June 7	787,378	259,370	75,210	371 580	74,895	453,113	60,700	106,000	127,800	625,650	167 495	1,987,233
June 14	798,820	263,220	74,975	378,270	73,965	461,635	62,995	106,000	126,650	631 450	153,510	1,994,475
June 21	804,055	261,355	73,220	377,905	73,625	469 075	65,585	106 000	125 500	631,500	153,600	2,002,790
June 28	806,660	259,200	73,945	373,485	74,590	472,870	61,365	105,000	123,000	625,000	154,055	1,989,365

*Includes North-Central Texas, Kansas, Oklahoma.
†Beginning February, 1923, Somerset, Mirando, Rockdale and Luling production included.
NOTE—Mexia production included in North Central Texas.

Imports of Petroleum at Principal United States Ports

The following represents the total imports of crude oil for the month with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N. Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
April	370,000	669,000	1,074,000	625,000	591,000	3,319,000	1,615,000	1,020,000	1,135,000	168,000	4,362,500	7,681,500
May	344,000	515,000	1,026,000	437,000	615,000	2,937,000	1,351,000	910,000	1,184,000	127,000	3,582,000	6,519,000
June	314,000	421,000	1,791,000	755,000	809,000	4,090,000	1,515,000	1,142,000	1,062,000	229,000	3,948,000	8,038,000
July	287,000	465,000	1,806,000	448,000	898,000	3,876,000	1,471,000	1,170,000	833,000	92,000	3,516,000	7,392,000
September	268,000	565,000	1,744,000	660,000	686,000	3,923,000	1,776,000	1,397,000	880,000	224,000	4,277,000	8,202,000
October	365,000	292,000	1,194,000	536,000	816,000	3,203,000	988,000	1,330,000	380,000	50,000	2,248,000	5,951,000
November	223,000	395,000	1,194,000	576,000	757,000	3,145,000	1,478,000	1,000,000	551,000	111,000	3,287,000	5,432,000
December	474,000	574,000	1,243,000	606,000	1,024,000	3,917,000	2,019,000	1,832,000	933,000	259,000	5,043,000	8,960,000
January	398,000	531,000	1,060,000	376,000	949,000	3,314,000	1,295,000	887,000	689,000	15,000	2,936,000	6,250,000
February	520,000	527,000	639,000	458,000	771,000	2,865,000	1,558,000	1,284,000	525,000	195,000	3,562,000	6,427,000
March	802,000	734,000	1,243,000	502,000	1,668,000	5,049,000	2,346,000	1,689,000	1,116,000	301,000	5,257,000	10,281,000
April	653,000	664,000	1,371,000	407,000	1,067,000	4,162,000	1,641,000	1,492,000	510,000	68,000	3,711,000	7,873,000
May	693,000	596,000	1,368,000	264,000	1,329,000	4,250,000	1,398,000	1,308,000	884,000	169,000	3,759,000	8,009,000
June 7	282,000	151,000	459,000	122,000	120,000	1,134,000	405,000	222,000	126,000	15,000	768,000	1,902 000
June 14	.....	196,000	223,000	.....	212,000	631,000	380,000	362,000	44,000	50,000	836,000	1,467,000
June 21	138,000	63,000	198,000	.....	201,000	600,000	304,000	277,000	193,000	17,000	791,000	1,391,000

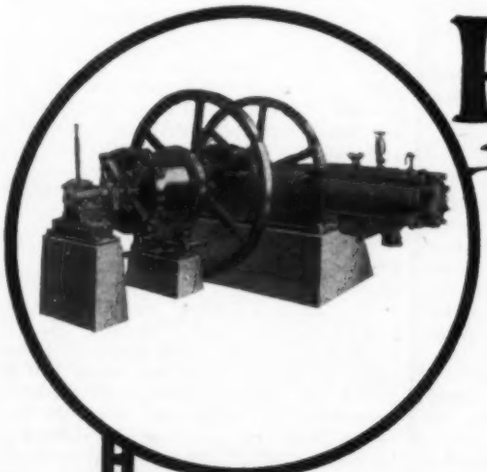
NOTE—Figures by American Petroleum Institute.

Receipts of California Oil at Atlantic Coast Ports

The following shows the receipts of California oil at Atlantic Coast ports by months with the current month given by weeks:

	Atlantic Ports						Gulf Coast Ports					Total at all Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	N Orleans Baton Rge.	Port Arthur Sabine Pass	Tampa	Total	
March	442,000	184,000	1,355,000	496,000	615,000	2,691,000	.....	.....	.....	.....	.....	2,691,000
April	105,000	256,000	2,456,000	502,000	320,000	3,639,000	.....	478,000	.....	.....	478,000	4,117,000
May	444,000	72,000	1,259,000	764,000	964,000	3,553,000	.....	300,000	53,000	.....	353,000	3,906,000
June	821,000	160,000	3,206,000	826,000	808,000	5,821,000	.....	664,000	.....	.....	664,000	6,485,000
July	443,000	75,000	2,068,000	741,000	699,000	4,080,000	.....	559,000	.....	.....	559,000	4,639,000
August	329,000	229,000	2,956,000	836,000	683,000	5,033,000	.....	970,000	70,000	.....	1,040,000	6,073,000
September	1,028,000	237,000	2,581,000	621,000	443,000	4,910,000	.....	703,000	.....	.....	703,000	5,613,000
October	779,000	224,000	2,503,000	779,000	429,000	4,714,000	.....	746,000	.....	.....	746,000	5,460,000
November	591,000	155,000	2,302,000	584,000	271,000	3,903,000	.....	935,000	.....	.....	935,000	4,838,000
December	454,000	215,000	2,901,000	813,000	753,000	5,136,000	.....	729,000	.....	.....	729,000	5,213,000
January	619,000	77,000	3,156,000	659,000	503,000	4,660,000	.....	615,000	.....	.....	615,000	5,275,000
February	326,000	145,000	2,811,000	842,000	75,000	4,199,000	.....	810,000	.....	.....	810,000	5,009,000
March	298,000	77,000	3,352,000	989,000	413,000	5,129,000	.....	.....	.....	.....	.....	5,129,000
April	170,000	77,000	2,633,000	378,000	224,000	3,482,000	.....	.....	.....	.....	.....	3,482,000
May	190,000	147,000	2,771,000	411,000	273,000	3,792,000	.....	315,000	.....	.....	315,000	4,107,000
June 7	.....	75,000	682,000	73,000	.....	830,000	.....	.....	.....	.....	.....	830,000
June 14	200,000	72,000	765,000	138,000	75,000	1,250,000	.....	.....	.....	.....	.....	1,250,000
June 21	182,000	.....	348,000	232,000	70,000	832,000	.....	.....	.....	.....	.....	832,000

Note—Figures by American Petroleum Institute.



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Say you saw it in The Oil Weekly

California Production Trend Downward

Torrance Field shows only slight increase with some good new wells, other helds showing losses daily

Los Angeles, Calif., June 28.—In spite of the fact that there were almost a dozen new wells completed and put on production at Torrance this past week the daily average showed only a slight increase over that of the previous week. The Torrance-Redondo field was credited with 60,100 barrels last week, this week's figures showed that the aggregate output ran 60,260 barrels daily. Approximately 4000 barrels of new production was brought in, and this record would seem to indicate that the older wells were falling off considerably. The figures show that the 4000 barrels of new production raised the field's output only 150 barrels and that the decline was more than 3800 for the single week.

The Chanslor-Canfield Midway led off with the big production at Torrance early in the week with a 1100-barrel well at No. 48 Torrance. This well was completed at 3725 feet and is making a production that runs close to 27 gravity. In addition to bringing in the Torrance field's banner producer the Chanslor-Canfield is drilling one of the most interesting wells of the field on the Francis property. Francis No. 1 at 4300 feet is looked upon somewhat in the light of a deep sand test well and is being watched closely for developments.

For the actual cash outlay and cost of putting on production the Torrance field has one well that sets a record. The Dean-Collins well offsetting the McKeon Drilling Company's No. 4 in the east section of the Lomita district, has been drilled to 3858 feet and put on production at an estimated cash outlay of $25,000. Only one string of pipe was used, a 6¼ string at 3560. Some 375 feet of 4½ liner was set on bottom. The crew took only their board and overalls while drilling, some of the equipment was loaned, and the co-operation of land owner, crew and the backer, Dean & Collins, put the thing over. The well is flowing about 100 barrels and is the only well in the immediate neighborhood that is doing anything worth while.

East End Play

That the Pan-American Petroleum Company has faith in the east section of the Torrance field is attested by the fact that 12 new wells are being started on the Kleinmeyer property. A total of 16 wells are included in the development program of this most easterly property and up to the present eight have been started. The judgment of the Pan-American was questioned when it started drilling extensively on the extreme west side of the Torrance field, but in the bringing in of some of the biggest and best producers in the district no concern is felt about the success of the east side move.

The report that the Shell Company had completed and put on production a big well on the Keystone property seems to be in error. The well was carried on from 3815 feet, its original depth, to 3842 feet. It made a production test and pumped a few barrels. The action of the well seems to indicate that the oil sands do not carry much oil or gas and the well, while pumping, seemed to lack life and pep, and really made a poor showing. Six months ago the Keystone well was heralded as the discovery well of the east side of Torrance and pushed what seemed at that time the production boundary line out two and a half miles eastward.

The Standard Oil Company's Ellingwood well offers a little more encouragemeent this week. The well last week went on the pump at 3745 feet and produced 125 barrels of water. It is now pumping about the same amount of fluid, but the oil content runs 25 per cent. The Ellingwood well is the first test on a large tract acquired by the Standard Oil Company a year ago, and on its outcome much of the development of the northwest section of the Torrance field hinges. At 3750 feet the Standard's Western well got a showing of oil. It will be remembered that the Union Oil Company drilling on the opposite corner of the same property several months ago did not get even a showing.

The Superior Oil Company added more new production to the Torrance field than any other concern this past week. The Superior completed three wells, a 350 barrel well in Torrance No. 4, a 350 barrel well at Torrance No. 19, a 500 barrel well in Torrance No. 27, and a 1100 barrel well in Torrance No. 35. The last mentioned well has an unusually high casing head pressure of 610 pounds. W. M. Keck is meeting with wondeful success in the eastern section of the Torrance field.

Deepest Test at Dominguez

If there is a deep sand to be found in the Dominguez field the Union Oil Company's Gardena No. 1, now drilling at 6900 feet, should find it. At this depth the formation is running in gray sand streaked with brown shale and there is nothing indicative of oil. The drilling of the Gardena well marks another feat in the successful drilling of deep wells with the rotary. The Union has only 300 feet more to go when the world's record of 7212 made by the Standard Oil Company at Santa Fe Springs will have been equaled.

Prior to the sinking of the Union's Gardena well to the 6900 mark the properties of the General Petroleum Corporation, the Macmillan-Davis Oil Company, the Julian Petroleum Company and the Chase Oil Company seemed to have a chance. It is doubtful now if drilling will ever be resumed on any of these wells. The Chase Oil Company has abandoned its No. 1 at 5104, the Julian well is standing at 4850, the Davis-Macmillan went 5286 and shut down, and the General Petroleum Corporation has shut down all wells but the No. 1 White, which is now drilling at close to 5900 feet.

The production of the Dominguez field was raised 1750 barrels by the completion of the Shell Company's Reyes No. 4 at 4133 feet. This new producer is making 32.4 gravity, clean oil, and is one of the best wells in the district.

The Bell-Little Drilling Company had a reversal of form and recovered from a bad fishing job on the Marland Oil Company's No. 4 in record time. At 2600 feet several hundred feet of drill pipe was lost. This was recovered in two days and the well is now below the 3200 mark. The Marland well marks what petroleum engineers believe the eastern boundary of the field and the progress of the Bell-Little Drilling Company is being watched with considerable interest.

Aside from the east line of the Dominguez field it appears that the boundary lines of the oil area have been pretty well established. The Dominguez field at best is a small structure, and the cream of the production has fallen to the Union and Shell companies.

Activity for Rosecrans

The watchful waiting for some one to start developments in the northwest section of the Rosecrans field has passed. The next 90 days will witness an unprecedented drilling campaign and some great producers rivalling Santa Fe Springs is some of the things on the prediction schedule for Rosecrans.

A few days ago the Sentinel Oil Company startled oil operators by starting a well at 120th and Vermont. C. C. Julian followed quickly starting a well at 124th and Figueroa. Joseph B. Dabney is the third operator to get busy, he has a rig going up on Lot 11, Block 21, Athens tract, and promises immediate development. Geo. F. Getty is lining up to start developments in the heart of the Howard townsite and will be drilling a test well before 90 days.

A new record was made in rig building construction when the California Rig Builders constructed a derrick in 17 working hours for C. C. Julian. Julian rounded up a community lease composed of 30 land or lot owners aggregating about 15 acres. Julian promised action 24 hours after signing the papers and the California Rig Builders made it possible for him to keep his promise. The getting together of 30 lot owners, and their agreement on terms and time is something of an accomplishment for which C. C. Julian should be given some credit. Every lot owner generally wants an oil well on his own particular burial plot, but arrangements were worked out on the 15 acre Julian lease where but five wells will be drilled. Probably more has been accomplished in the abolition

of town lot drilling in the Athens field to date than any other field in Southern California.

During the past week new wells were started by the Bankline Oil Company, the Barnsdall Oil Company, the General Petroleum Corporation, and the Union Oil Company in the Rosecrans district. A total of ten new wells were started.

The Union's battle with water conditions in the Rosecrans well continues and the outlook does not look hopeful. The failure to secure a shut off with 4¼ at 4958 was a great disappointment, and now the hope lies in being able to effect a shut off with a string of three-inch. The three-inch string is the last straw.

1500 Barrels at Long Beach

The Shell Company's holdings at Long Beach staged the field's big production this past week. On the Patton-Wilson lease, No. 3, drilled to 4800 feet, came in a 1500 barrel well producing 26 gravity oil. On the Alamitos lease, the discovery property of the Long Beach field, the Shell redrilled and completed No. 4 at 4845 and got a 1200 barrel well making 23 gravity oil. The addition of these two big producers boosted the Shell Company's production over the 44,000 barrel mark.

For the first time in the history of its long and successful development career at Long Beach the Marine Oil Corporation has met with a reversal of form. The Marine has a habit of bringing in three and four thousand barrels and has kept the habit going until well No. 23 came along. No. 23 was drilled to 5300 feet, showed a lot of good deep sand, but when tried out for production refused to make anything better than a small pumping well.

W. R. Ramsey the Oklahoma and Mid-Continent operator whose spectacular developments of the east slope of Signal Hill attracted so much attention has been halted. Ramsey's McNaughton well, scheduled for a gusher to duplicate his near by wells, was given a production test at 4578 and failed to make good. After being swabbed for several hours it was decided to pull the tubing and clean out. Under better production conditions the McNaughton well may get under way and make a commercial producer.

Long Beach suffered a heavy production decline, the heaviest shown in several weeks. Last week the field was credited with a daily average of 168,000 barrels. This week's production resume gives Long Beach only 163,000 barrels. Approximately 3000 barrels of new production was added to the field's output, but this as the figures show did not take care of the decline. Long Beach has been a great field, the greatest California has yet produced, and there is left yet no small amount of production. Few wells in the Long Beach field have failed to pay-out, this is a record that few other California fields is able to duplicate. Had it been possible to eliminate town lot development Long Beach would have gone down in the oil history of the West as the one perfect oil field.

Springs Production Drops

Santa Fe Springs production touched the 62,000 last week, the lowest in the history of the field. The production decline in the past month has been running from 1000 to 1500 barrels a week. The only new production increases that can be expected from the field is from the redrilling and cleaning out of old wells and the installation of better and more efficient pumping equipment in the present producers. The redrilling and cleaning out of old wells has not increased production materially, but the installation of deep well pumps, especially the long stroke pump, has increased the output of former producers noticeably.

The only new development work now under way in the once famous field is being carried on by the Standard Oil Company. The Standard has five wells drilling. The wells include No. 10 on the Santa Gertrudes property, O. A. Houghton No. 2, W. L. Houghton No. 3, Orr No. 4 and Jordan No. 6. With the completion of these wells the Standard Oil Company will ring down the curtain on development at Santa Fe Springs.

Success at Huntington

E. J. Miley is authority for the fact that old Huntington Beach still has possibilities of oil production. Miley's organization, the Pacific Petroleum Corporation, redrilled well No. 9 to 3250 feet and got a 300 barrel production.

The efforts of the Globe Petroleum to extend the eastern front of the Huntington Beach field to date has not met with any success. The Judd well, an east extension wildcat, has passed the 4660 foot mark without getting any

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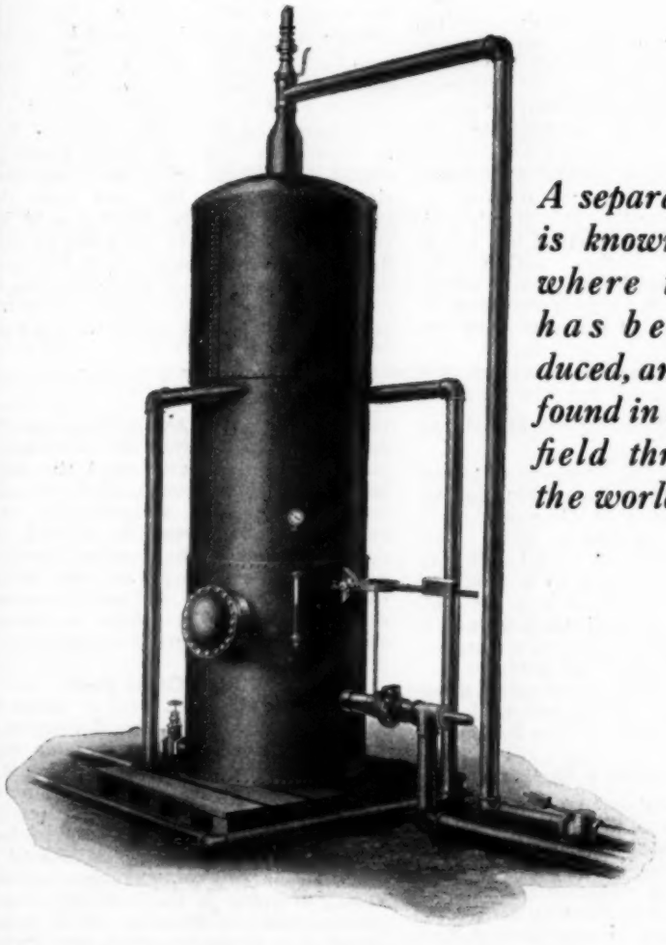

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Texas Light Oil Production Under Year Ago

North and Central West fields have been slowing operations in recent weeks; proration effects parts

By H. H. King

Wichita Falls, Texas, July 1.—Further limiting of drilling operations throughout the North and Central West Texas fields is almost certain to follow now that Prairie and Sinclair Companies have announced a general proration of crude purchases and runs effective July 1. The bulk of the crude purchases subject to proration in Texas by these two concerns is from fields in Eastland, Stephens and other nearby counties, while neither of the two companies have any appreciable amount of daily runs from North Texas outside of their own production. It is of interest to note that the combined daily output of the North and Central West Texas fields is now considerably less than the daily average production prevailing one year ago to the week when the same two major purchasers took the lead on prorating crude runs. Since the total daily production in these various fields is now less than it was a year ago, it is believed that a widespread proration policy will not incur as great a hardship on the independent producers as was the case last year.

Drilling activities in the five counties furnishing the major portion of the crude produced in the North and Central West Texas district has taken a noticeable decline within the past month, especially in Archer County, which listed 214 operations on May 10. On the first of the year field operations in these counties was just beginning to show signs of recovering from the 1923 proration period, as can be seen by the large number of locations and rigs listed in the table below as of January 1, while a survey taken on July 1 reveals only a small amount of new work and mostly drilling wells.

The table below shows the status of drilling operations as of July 1 and totals on January 1 in five counties comprising the major producing areas in the North Central West Texas district:

	Drilling	Shut Down	Rigs & Dks.	Lcns.	Totals
Archer	58	30	20	3	111
Wichita	64	18	17	7	106
Stephens	60	28	14	3	105
Eastland	28	5	7	3	43
Young	20	11	..	1	32
Totals July 1.	230	92	58	17	397
Totals Jan. 1	162	83	71	27	343

Wichita and Archer Counties failed to contribute any important developments during the past seven day period, and the pipe line runs from the latter county and the Electra field increased slightly more than 400 barrels daily each as compared with the previous week's totals. This increase in runs is largely due to emptying of storage tanks at leases rather than a sudden jump in production. The Prairie Pipe Line Company, which only recently completed a new line to Archer and Southern Wichita County, transported 2900 barrels daily from its leases in Archer County last week, and during the same period purchased an additional 800 barrels daily from the Ryan Petroleum Company's Nance lease in the Beaver Creek section of Wichita County. The Texas Company's wildcat producer on the Pease Estate (Graham) in Archer County, was placed on the pump early this week, and made about 140 barrels of oil and 40 barrels of salt water from sand at 1438-40½ feet, while it is understood that a small pipe line will be extended to the well.

The North Caddo field in the east half of Stephens County added another big well late last week when Critten-Lacey et al's S. C. Cobb 3, located in the northeast corner section 16, blew in with an initial flow of 50 barrels per hour and later increased its flow after drilling gray lime pay from 3220 to 3295 feet. An offset to the east of this recent completion was depened 15 feet to a total depth of 3280 feet, and increased its flow from 900 to 1100 barrels daily. It is also owned by Critten-Lacey and others, and was completed April 24 with initial flow of 1200 barrels and 10,000,000 cubic feet of gas. Prairie has been running the oil from these properties, and in view of the fact that the production is to be prorated the owners were negotiating for a 55,000 barrels tank early this week to store the restricted portion of their production.

Another deep producing horizon has been opened for development in Stephens County by the performance of the Prarie Oil and Gas Company's A. S. Veale C-8, which flowed 150 barrels of oil and 6,000,000 cubic feet of gas after drilling pay from 3935 to 3940 feet. This well is in section 1413, T. E. & L. survey, and about 12 miles due east of Breckenridge. The deep pay in the Curry pool has added another disappointment by reason of a north offset to Magnolia's deep producer failing to uncover production after drilling below 4030 feet. Last week Gulf's Childs 2 was reported dry at the regular pay depth, and is now drilling at 4155 feet in broken lime.

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oil and the outlook cannot be said to be encouraging.

The Standard Oil Company is trying to push the field limits of Huntington out northwest with its Orange County Title well now drilling at 5510. This well has had showings of oil sufficient to warrant the running of a string of 6¼ casing. However at best the well will make only a small producer and it will occasion something of a surprise if it makes a commercial producer.

Huntington Beach Production dropped to 45,000 barrels this last week, setting a new low mark for the field.

East Whittier a Question

With the McKeon Drilling Company's O'Donnell No. 2 on the Strong lease past the 4600 mark, there is little concern being expressed about the outlook of the field. The famous O'Donnel No. 6 struck what was considered a new deep sand at 4260 and made a spectacular showing six months ago. The Strong well is less than half a mile away on the south slope of the hill, is down almost 400 feet deeper and has not picked up the oil sand.

The log of the McKeon-Strong well seems to indicate that either the Rideout Heights field is a small structure, or that there is a very steep dip between the famous No. 6 and the Strong test well at 4600 feet.

O'Donnell's No. 2A, drilling for the deep sand, has passed the 4500 mark and to date has not found the deep sand. At 4600 the sandy shale showed streaks of oil sand, an indication that something good may be picked up soon. In view of the depth of the discovery deep sand well and the depth of other test wells drilling, operators are beginning to be a little concerned about the field's future developments.

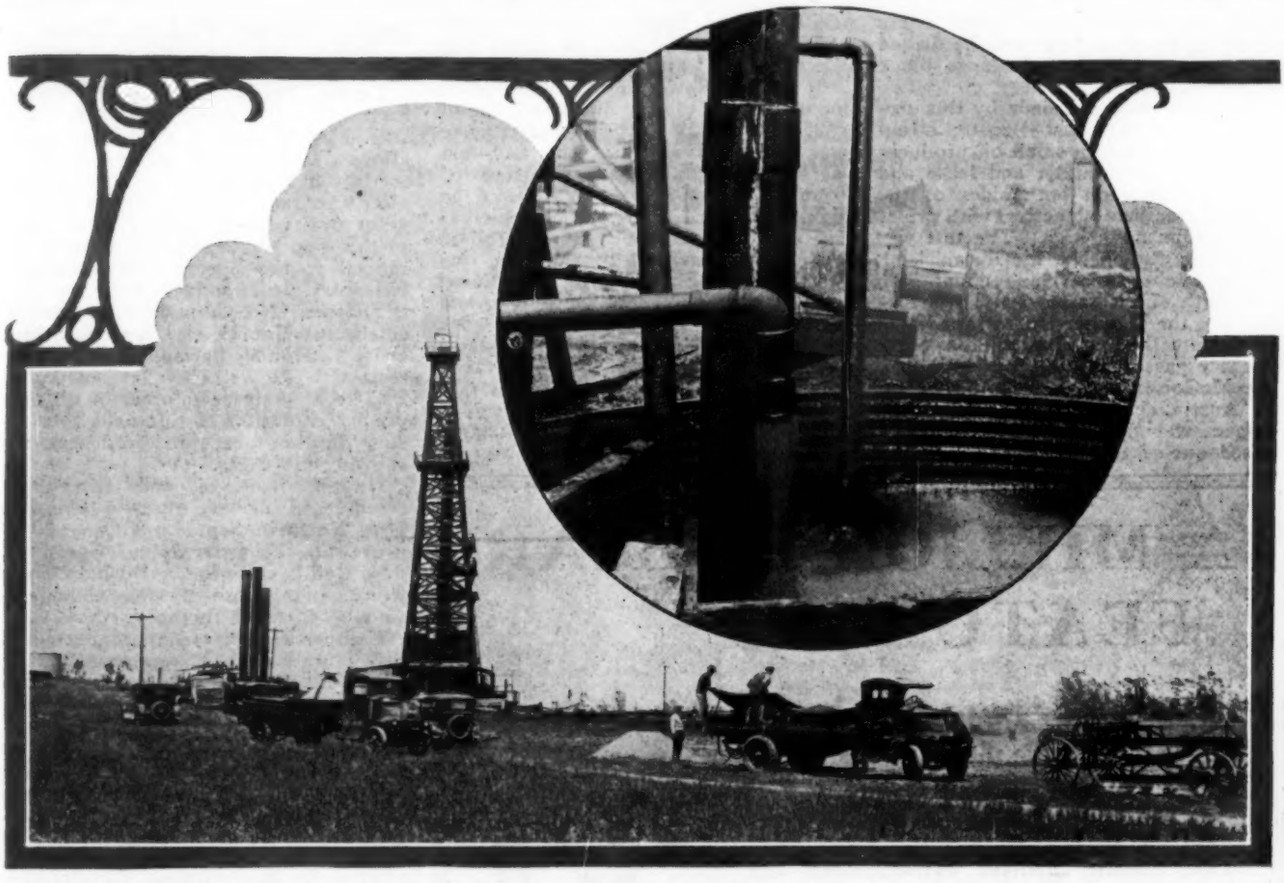
Brea Field Come Back

That the old Brea field is about to stage a come back for development work is the concensus of opinion now of oil operators since the Union Oil Company picked up a splendid showing of oil in its Graham-Loftus No. 55. This test well was drilled to 4754 feet, and at 4650 the showings increased to such an extent that a string of 6¼ casing is going in the hole and a production test will be made. It is understood that Graham-Loftus No. 55 has passed through some 100 feet of highly productive oil sand and that a good producer is assured.

Another well that is showing up very favorably and adding to the outlook for deep sand drilling revival in the old field is the Krohn-Blake-Hazzard well drilling now at close to 4000 feet. From 3800 feet on the well has been checking up very strongly with the Union's deep test G. & L. 55.

Magnolia Operating New Pipe Line in Oklahoma

Tulsa, Okla., July 1.—Magnolia Petroleum Company began running oil early this week through its new 5-inch line serving the so-called Morrison field, Pawnee County. This line has a capacity of about 8000 barrels daily, and is 18 miles in length. The pump station is located in section 32-23N-3E, and the line ties into Magnolia's Burbank line on the south bank of the Arkansas River.



One of the producers in the Rosecrans section of California as it looked when it came in recently This well made oil testing better than 37 gravity. Much activity is now being reported from the new field and considerable interest is centered around its production possibilities.

Jim Hogg County Gasser Opens New Interest Area Three Miles East of Discovery Well at Mirando

Laredo, Texas, June 30.—A gasser, the first producing well in Jim Hogg County, came in late Tuesday afternoon with a roar that could be heard for miles. The initial production was estimated at 75,000,000 and was also spraying oil. This test was drilled by Henne, Winch and Farriss on block 3, survey 256, about three ane one-half miles east of the Mirando Valley discovery pool. Casing was set at 1643 feet over 16 feet of sand that showed both gas and oil, the well blowing in after running the fourth bailer.

This well opens a new pool and a new field. It will cause an increase in development in both Jim Hogg and Zapata Counties.

Richmond-Garcia Oil Company's No. 4 was completed the first part of this week with a production of about 75 barrels. Difficulty was met with in completing this well which is 1668 feet deep. Binney et al No. 2 was mudded up and drilled deepr, getting a much heavier flow of gas than when it was brought in last week.

Casing will be set soon in the Carnahan Producing Company's No. 60 in the Schott Pool. The Hobo Oil Company is drilling below 1000 feet and the Laredo Oil Company is bailing No. 8, which has promising prospects.

The Andrews well in the Aviator Pool, is being cored below 1500 feet. The Associated Oil Company has suspended drilling temporarily, and the rig, which is the property of Bill Allen, has been moved to drill Cintex No. 6, in the Mid Ojuelos pool. Dauchy and Bryant, on the Albercas ranch, cored below 1500 feet. The Texical Oil Company set casing over sand below 1700 feet. This well is said to have prospects for a producer.

The Cintex Petroleum Company is drilling below 800 feet in No. 6. The Cornhuskers Oil Company is drilling in No. 4, while the Richmond-Garcia Oil Company set casing in No. 6 at 1656 feet. Wheatley et al is preparing to set casing around 1700 feet in No. 10.

In the Wolcott Pool Chandler and Gier set casing at 1759 feet in No. 7. Calumet Petroleum Company coring below 1600 feet in No. 1. The Magnolia Petroleum Company is rebuilding the derrick for No. 5 which was pulled in several days ago. The Welasco Oil Company spudded No. 5, which is located between Nos. 3 and 4 on block 60 of the Ochoa pasture partition.

The Cole Petroleum Company is coring below 1400 feet in No. 4 on the Los Angeles tract. R. S. Howard has shut down No. 1 on the southwestern corner of the Albercas ranch. Quigg et al No. 1 will probably spud in the first of this week. This test is located on Portion 33 east of Laredo.

The Morgan-Gibble No. 2, in the Carolina-Texas gas field, is ready to bail from a depth of 1305 feet. It will probably be a large gasser, however, the core was heavily saturated with oil showings.

In Duval County, the Iowa-Texas-Oklahoma Syndicate is preparing to ream to 2047 feet where casing will be set before drilling deeper. Carpenter-Field et al No. 1 on the Mesquite ranch is standing at 1600 feet, awaiting the arrival of the owner from the north.

The Hill Pierce Oil Corporation spudded No. 1 on the Villa tract in Zapata County.

Second Test on Bazette Structure Showing Oil

Corsicana, Texas, June 30.—The Boyd Oil Company's second wildcat test on the East Bazette structure in the northeast part of Navarro County threatened with a new oil field for the fault region in East Central Texas last week when cores taken in the Woodbine sand pay showed oil and slight traces of gas, but a miscalculation on the depth of the hole resulted in it being carried about 20 feet lower than was intended and into salt water at 3285 feet. It is expected that another string of casing will be run to shut off the water to drill deeper in search of a lower producing horizon and also to gather geological information on subsurface conditions underlying the upper Woodbine formation. The oil saturated cores taken from this test adds weight to the faith that officials of the Boyd Oil Company have in developing an oil field on this structure,

which has already contributed a big gasser, and a third test is to be drilled shortly on the company's large block of leases.

The early showing made by this second test on the East Bazette structure indicated that a small oil producer was almost a certainty, and lease and royalty trading on both sides of the Trinity river became active, with prices running unusually high. The test was drilled on the G. R. McGowan land, Morris Webb survey, and about 2800 feet south of the same company's first test on the Conner-Rutherford land, which furnished a nine million cubic foot dry gasser on May 8 at 3190 feet. The McGowan test logged the top of the Austin chalk at 2333 feet with a surface elevation of 388.7 feet, and passed out of the main body of chalk at 2717 feet. From this point shale formation was drilled to 2762 feet where chalk was found to prevail to 2807 feet, followed by another shale break before entering the last trace of chalk from 2823 to 2829 feet. Casing was cemented at 3193 feet, and last week an oil-saturated sand was cored from 3242½ to 3246 feet, followed by a break of hard sandstone before coreing into another good show of oil in sand at 3252 feet. A control head was installed Saturday before suspending operations over the Sabbath day, and when the drilling crew resumed work Monday morning they found salt water in the hole. Measurements were taken on the depth of the hole, and it was then learned that it had been drilled 20 feet deeper than expected through a mixup in counting the fourbles.

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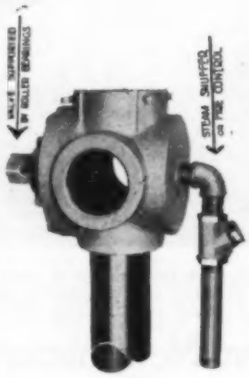

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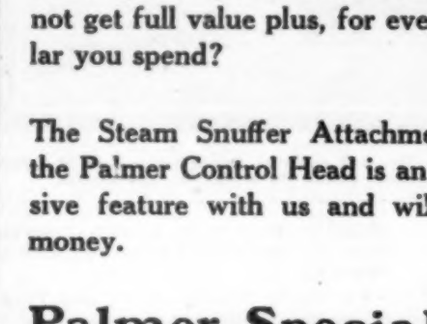

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Luling Shows Pickup After Rains Furnish Boiler Water

Luling, Texas, July 2.—The recent rains in the Luling oil fields have served as an impetus to drilling operations. Wells which were shut down for lack of water, are now being drilled after the rain. There will also be a great deal of new drilling as a result of the rain. New blocks are being arranged in the Seguin fields and new operators are coming in daily.

Thorman No. 3, in Harris tract in Guadalupe County was brought under control Monday and is now being reamed. The well blew in Saturday at 2063 feet. A large number of oil men predict extension of this field as a result of the fact that producers are showing more gas.

Howell Brothers and Ritz have commenced drilling on the Freeman farm North of Seguin. This well will prove up the area around Geronimo. This well is close to the Bushney creek which runs close to the Guadalupe County oil fields to the north.

California interests are expected to drill a well, probably starting July 15, on the Brown farm between the Howell Brothers well and that of the Walhunda Oil Company Inc.

Five completions, four of them on the Allen tract in Guadalupe County, were made last week. The other well is on the Schubert tract. Two are gassers, two are producing oil, and the other is making oil and water.

The J. K. Hughes Development Company completed No. 7 Allen with an initial production of 800 barrels, and No. 8 for 5500 barrels. This is the largest producer this month. The Grayburg Company's well No. 6 Allen, was brought in for 800 barrels of fluid. The Texas Company also brought in another well at 900 feet. The Magnolia Petroleum Company completed a gasser on the Schubert tract which will be used for fuel. Gas still shows in Rycade's No. 1 Maierhoffer, at 2250 feet.

Louis Crouch is the drilling contractor for W. L. McClanahan's No. 1 Winkler in Bexar County, on Winkler place, east side of the county.

Drilling report for Guadalupe County: Walhunda Oil Company's No. 1 Smith, drilling at 680 feet. C. C. Cannan's No. 1 Forcey, drilling at 2000 feet. Howell Brothers No. 1 Willman, drilling at 1036 feet. Grayburg Oil Company's No. 1 Weinert, drilling at 600 feet. Rycade Oil Company's No. 1 Maierhoffer, drilling at 2520 feet. National Oil Company's No. 1 Hensel, shut down at 2400 feet.

O. H. Powell, general superintendent for the Sinclair Pipe Line Company with headquarters at Fort Worth, visited the Tulsa district offices of the company early this week.

R. S. Mathiott, district credit manager of Oil Well Supply Company at Shreveport, who has been confind to his bed for six weeks, left recently for Mayo Brothers at Rochester, Minnesota, for treatment. His many friends wish for him a speedy rcovery.

W. H. Taylor, Gulf Production Company superintendent at Hull, inventor of the Lufkin-Taylor make and break rotary, is in California for a few weeks.

Past Week at Cotton Valley Was Discouraging

Early resort to pumping and appearance of increased cut oil is disappointing to operators; still hopeful

Shreveport, La., July 1.—Ohio Oil Company's Merritt 2 came back yesterday after being cleaned with cable tools, blowing the tools over the crown block. After flowing at the rate of eight or ten thousand barrels per day for 14 hours it again went dead this morning about 3 o'clock. Action of this well tends to refute the theory of decline of gas pressure and seems to indicate that heaving of the soft sand may be the source of the trouble now being experienced at Cotton Valley.

Taken as a whole, reports received last week from the Cotton Valley field are of a disappointing character; new completions either failed to flow or made only gas, and cut oil made its appearance in increasing proportions. The Gulf Refining Company is installing an air compressor to blow its Hodges well, in section 11. The Ohio Oil Company is erecting a treating vat on its Merritt lease, in section 14. Practically all operators are rushing ir standard rig material.

This early necessity of resorting to artificial methods comes as a surprise to many students of the field, who had not expected flowing wells to go dead so quickly. Gas pressure has declined considerably in the northern edge wells, and many of them are showing daily increases in output of salt water No appreciable decline of gas has been noted in those wells located higher up on the structure.

Operators Optimistic.

While the general attitude is at present unmistakably pessimistic, there is nevertheless a clearly distinguishable undercurrent of optimism regarding the ultimate value of the new field. It has been recalled that Haynesville and Smackover looked equally disappointing at a similar stage in their development, but that big booms subsequently resulted in both fields. Coincidentally the discovery wells in both of those fields, as well as at Cotton Valley, are located near the northern boundaries. All data yet available seems to indicate a southern or southwestern trend of the Cotton Valley structure, and it is upon the untested acreage lying in that direction that the highest hopes are based.

A most important test is to be made this week in the Ohio Oil Company's No. 1 Crichton, located in the northeast corner of the southeast quarter of section 21, in which 6-inch casing has been cemented at 2456 feet. The log of this well is said to be checking favorably high in comparison with those of the nearest oil wells located a mile and a half northeast, and with that of the Fortuna Oil Company's Cox gasser, located in section 23, about the same distance east. Hude & Aarnes are said to have encountered the Nacatoch horizon at a sti" higher level in their No. 1 Cox, in section 22, about a half mile northeast of the Ohio's impending test. The Standard Oil Company is about ready to set 8-inch casing in its McInnis well, offsetting the Ohio on the east, and the Invincible Oil Company is rigging up on the northern offset to it.

The Oil Fields Gas Company's Hope B-2, located near the northwest corner of section 24, was completed yesterday as a dry gasser from 22 feet of sand at a total depth of 2507 feet. It is an isolated well, located about a half mile south of Dr. Webb's discovery gasser and about three quarters of a mile northeast of the Fortuna's Cox gasser.

The Humble Oil & Refining Company tested salt water with a showing of oil at 2534 feet in its No. 1 Hodges, in section 12, a half mile north of production. Liner has been pulled, and casing is now in progress at around 2544 feet. That company's No. 2 Hodges, in section 11, a northern offset to the Ohio's Merritt gusher, now dead ,and an eastern offset to the Gulf's Hodges well, also tested salt water with a similar showing of oil from two feet of sand at a depth of 2556-58 feet.

The Oil Fields Gas Company's Hope A-1, in the northwest corner of section 13, which also was tested last week, faild to flow from ten feet of sand at a total depth of 2528 feet ,although it has around 1200 feet of oil in the hole. A standard rig is being built.

The Invincible Oil Company's No. 2 Merritt, in section 14, one location north of the discovery oil well, also was tested last week, and likewise failed to flow. A string of tubing and packer was set in the well yesterday, and it was being swabbed through the tubing today in an effort to bring it in as a flowing well.

Sarepta

The Atlantic Oil Producing Company has bailed dry with only a showing of gas at 2727 feet in its No. 1 Bodcau Lumber Company, in section 24-23-12, Bossier Parish, about five miles northwest of Lloyd Harris' well.

Col. Estes' recent completion, in section 15 of the same township, resumed flowing yesterday, after having been dead a couple of days. It is making from 60 to 75 barrels of oil per day, along with a greater amount of salt water, from a total depth of 2721 feet.

Rhodessa

The Louisiana-Texas Community Oil Company drilled the 6-inch plug today, and will drill in tomorrow in its No. 1 McCoy, in section 15-23-16, of Caddo Parish ,about one mile northwest of Rhodessa. Casing was set at 2717 feet. The log of this well seems to be checking higher by about 50 feet than those of the other wells drilled during the last year or so in section

SURVEY OF PRODUCTION OPERATIONS COTTON VALLEY FIELD
JUNE 30, 1924.

Company, Well—	S—T—R	Location	Depth	Remarks
Ohio Oil Co.—				
Hodges 1	15-21-10	NEc SE¼	2,512	Gas well.
Hodges 2	15-21-10	SEc NE¼	2,533	Flowing 750 bbls.
Hodges 3	15-21-10	NEc	2,546	Fishing for swab. Swabbed 95% s. w.
Merritt 1	14-21-10	SWc NW¼ NE¼	2,538	Flowing 350 bbls.
Merritt 2	14-21-10	NWc NW¼ NE¼	2,546	Dead. Building std. rig.
Humble Oil & Ref. Co.—				
Babb 1	14-21-10	NEc SE¼ NW¼	2,542	Flowing 110 bbls.
Babb 2	14-21-10	NWc S½ NE¼	2,560	Flowing 500 bbls.
Hodges 1	12-21-10	NEc W½ SW¼	2,534	Tested salt water. Coring 2,546 ft
Hodges A-1	10-21-10	SEc	2,462	Abandoned; no test.
Hodges 2	11-21-10	SWc SE¼	2,553	Tested salt water; to drill deeper.
Bodcau Lbr. Co. 1	14-21-10	NWc NW¼ SW¼	2,527	Came in June 13th as a gas well; now making 175 bbls. of oil.
Fortuna Oil Co.—				
S. J. Merritt 1	14-21-10	SWc SW¼ NW¼	2,514	Flowing 225 bbls.
L. Merritt 1	14-21-10	NWc	2,543	Wont flow. Bldg std. rig.
Mrs. Ira Cox 1	23-21-10	NWc N½ SE¼	2,500	Gas well.
Invincible Oil Co.—				
Merritt 1	14-21-10	SEc NE¼ NW¼	2,534	Flowing 300 bbls. Bldg. std. rig.
Merritt 2	14-21-10	NEc NE¼ NW¼	2,553	Set tubing; swabbing.
Hodges 1	11-21-10	SWc	2,558	Swabbed 90% s. w. Bldg. Std. rig.
Gulf Refg. Co.—				
Hodges 1	11-21-10	SEc SE¼ SW¼	2,561	Swabbing 1200 bbls. fluid, 375 bbls. oil.
Oil Fields Gas Co.—				
Hope A-1	13-21-10	NWc	2,528	1800 ft. oil in hole. Bldg. std. rig.
Hope B-1	13-21-10	NWc E½ SW¼	2,505	Gas well.
Hope B-2	24-21-10	SEc NW¼ NW¼	2,507	35 million ft. gas, spraying oil.

32 and 33 of this same township, all of which showed oil in varying quantities.

Oakland

The Gulf Refining Company has set liner and is engaged in making a test of four feet of sand at a total depth of 2192 feet in its No. 2 Security Trust well, in section 24-23-1w, of Union Parish.

Costello and others are building a derrick on the Nelson land, in section 17 of the same township.

Claiborne Parish

Operations were resumed Thursday in the Black Oil and Gas Co.'s No. 1 Aubrey, in section 20-21-8, four miles west of the Homer field, which has been shut down for more than three months. Whn the drill stem was started back in the hole the well began to show both oil and gas in considerable quantity. Indeed, it is said that it threatened to blow out, making it necessary to mud up the hole again. This well previously has been reported as having attained a deph of 1610 feet, but its owners now state that it was drilled into 12 feet of sand at a depth of only 1450 feet.

Collins & Woodley have abandoned their No. 1 Reynolds, in section 30-21-4, near Lisbon. The Standard Oil Company is drilling at 2235 feet in its No. 1 Lloyd, a wildcat in section 10-20-5w, four miles southwest of that town. The Triangle Drilling Company is coring in broken lime at 2075 feet in its No. 1 Ferguson, in section 5-21-5, about five miles northwest of Lisbon.

Other Wildcats

A considerable amount of oil is being bailed from Fuller & Scott's Furrh wildcat, located just across the state line, near Waskom, in Harrison County, Texas. This showing of oil has aroused a great deal of interest, although it is considered doubtful if a commercial well can be made of the current operation. Total depth of the well is reported as 2397 feet. Its owners are now rigging up to drill a second test on the property of the Waterman Lumber Company, James Short Headright survey, nearby.

Brewer & Sewell are building a derrick on the Sharp land, in section 10-18-16, of Caddo Parish, in the general vicinity of a well drilled by them several months ago in which a gas blowout was encountered.

T. C. Adams et al are preparing to begin operations on a wildcat to be known as Johnson No. 1, located in section 16-14-16, Caddo Parish, about six miles west of Keatchie, La.

Cowley County Well Either Marks New Pool or Is Three Mile Extension of New Kansas Area

Wichita, Kansas, July 2—Three miles northeast of the Rainbow Bend field of Cowley County, the Alcorn Oil Company has either extended the producing area opened during the winter by the Waite Phillips Company or has found a new pool. A wildcat well on the Graham farm came in during the past week for a flow of almost 500 barrels per day. The Alcorn Oil Company No. 1 Graham, in the northeast corner of section 9-33-3 found the Wilcox sand at 3505 feet and drilled in ten feet to the 500 barrel pay, after drilling through the Mississippi lime found at 3181 feet.

The Alcorn Company is erecting tanks to take care of the oil when the well is opened up, moving storage tanks from the C. C. Young lease, five miles southeast of Oxford.

In section 10-33-3, the Alcorn Company has staked a location east of the Graham well while the Gypsy Oil Company, owners of a lease to the north of the producer, is preparing to drill their offset as is the Waite Phillips Company, holders of a diagonal offset in section 3-33-3.

Contracts for 140 miles of pipe line for the state of Kansas has been completed by the Woods Brothers Corporation, and the Manhattan Oil Company. The line which is to be a six inch, will have a daily capacity of 10,000 barrels, running oil from the Greenwood County fields to the Fairfax district of Kansas City, Kansas. The cost of the project is estimated at $1,500,000. The charter for the new pipe line was issued to the Manhattan Pipe Line Company, acting as a subsidiary of the Manhattan Oil Company, one of the largest independent producers in the state. The line will traverse the counties of Wyandotte, Johnson, Miami, Franklin, Coffey, Cowley and Greenwood.

John Rodgers and others No. 4 Cartwright, southwest corner of the northeast of section 6-24-10, tapped a sand at 2265 feet and after drilling to a total depth of 2325 feet, reported a completion of a 75 barrel well. The producer is located between the Agard and Thrall pools in Greenwood county, an offset to the Mission Oil Company's Cartwright 1, a small producer of no commercial value and a diagonal offset to a dry hole drilled by the National-Lewis interests.

The Lucky Seven Oil Company's new producer in Russell county continues to make around 700 barrels per day as an average and has run as high as 900 barrels in one 24 hour period. The well will not be deepened until the Sinclair Company agrees to take more of the oil into their pipe line, which is connected. A quarter of a mile west of this well, the Skelly Oil Company recently consummated a deal for 80 acres, comprising the east eighty of the northeast quarter of section 18-12-15 west, for a consideration reported to be $500 per acre, while Sinclair Oil and Gas Company paid $14,000 for eighty acres comprising the northeast forty of the northwest quarter and the northeast forty of the northeast quarter of section 5-12-15 west.

Production added by the Russell County wells and the Rainbow Bend field in Cowley County, gives the total output of the state, a material and steady increase.

Los Angeles Shipment Doubles Previous Week

Los Angeles, Calif., June 28.—Twenty-eight tankers departed from Los Angeles Harbor during the past week as compared to 19 of the previous week. Total crude moved amounted to 1,554,038 barrels or more than double the amount of the previous week. This increased movement was due almost entirely to large shipments to Atlantic domestic ports, which averaged 156,792 barrels daily. One cargo of gasoline (75,400 barrels) was consigned to Philadelphia. Shipments to points other than Atlantic domestic were not unusual.

The record in barrels for the past two weeks follows:

	Last Week	Prev. Week
Tankers departed	28	19
Total crude moved	1,554,038	696,883
Total fuel moved	382,182	477,962
Total gasoline moved	102,470	72,449
Total kerosene moved	.....	.....
Crude to Pacific, Domestic	261,019	298,054
Fuel to Pacific, Dom.....	202,944	288,604
Gasoline to Pacific, Dom.	27,070	.....
Crude to Atlantic, Dom.	1,097,543	395,829
Gasoline to Atlantic, Dom.	75,400	72,449
Crude, foreign	195,476	.....
Fuel, foreign	179,28	189,358

Month's Movement Leaves Much Oil at Smackover

El Dorado, Ark., June 30.—Although the production of Smackover light oil showed a decline of approximately 2000 barrels per day last week, as compared with the preceding week, the production of heavy oil offset this loss by an increase of more than 3000 barrels per day.

Approximately four million barrels of oil were shipped from the Smackover fields during May; but on June 1, last, a stock of more than 21,000,000 barrels still remained on hand in the field.

The best wells among recent completions continue to be reported from the Norphlet extension, as per the accompanying report. Others are of routine character.

The Markle Syndicate recently tested salt water, with no showing of oil or gas, in six feet of sand at a total depth of 2260 feet in its No. 1 Plummer located in section 22-9-10, Cleveland County, near Rison.

The Harrell Trust tested hot salt water from seven feet of sand at a total depth of 2662 feet in its No. 1 Teele, in section 11-19-12, near Strong, in Union County.

The Ken-Saw Petroleum Company has built a derrick for a second test to be drilled on the property of the Red River Land Company in section 3-20-24 of LaFayette County, near Arkana, and four miles north of Col. Estes' new well, just across the state line, in Bossier Parish, Louisiana.

R. S. Mathiott, credit manager of the Shreveport district office of the Oil Well Supply Company, departed last week for Mayo Brothers Hospital at Rochester, Minnesota, to recuperate after having been confined to his home in Shreveport for the past six weeks owing to ill health.

Canadian Drilling Activity Over Wide Area From Montana to Within 100 Miles of the Arctic Circle

Calgary, Alta., June 30.—The end of June sees approximately a score of tests, some of them still merely in the location stage, scattered over a wide arear in the Canadian West, extending from the Alberta-Montana boundary north to within 100 miles of the Arctic Circle. In the far north, only one test is being drilled this season, the new Imperial Oil, Ltd., test close to the Fort Norman discovery well. This test should start work early in July, by which time the drilling crew, now en route, are expected to reach Fort Norman.

Imperial Oil, Ltd., has at the present only one test actually drilling in the Canadian West. This is Coalspur No. 2 in the Rocky Mountain foothills west of Edmonton. The Coalspur test is drilling around 450 feet with a 20-inch hole, and is planned as a final and definite test of the structure at this point.

In the Okotoks field, southwest of Calgary, where operations are carried on by an Imperial subsidiary, the Royalite Oil Company, drillers are working on casing in No. 3 well, section 6-20-2w5. This test, at 2830 feet, has approximately 3,000,000 cubic feet of gas per day. The casing trouble may result in the test being finished at this depth as a gasser, in which event No. 4, section 7-20-2w5, will be deepened from 3185 feet. No. 4 already has 6,000,000 cubic feet of gas. In the Okotoks field the McLeod Oil Company seems to be the only independent concern drilling, though the Illinois-Alberta Oil and Refining Company, which secured some gas production a couple of years ago, is utilizing the gas in a small absorption plant, the residual gas being blown into the air.

The new Imperial Oil, Ltd., test in the southern foothills, west of Nanton, has been delayed by wet weather, but is now rigging up. The location is near Rice Creek, in the Willow Creek district.

Outside these areas Imperial Oil, Ltd., has definitely undertaken no other work this season. No drilling will be done this year in the Irma-Wainwright field, according to the present outlook, and whether or not any work will be started in the Sweetgrass district is uncertain.

It is reported that the Gladys-Belle Oil Company, holding 15,000 acres in the eastern section of the Sweetgrass field not far from the Canadian Oil and Refining Company (Rogers-Imperial) gasser, will test its Canadian acreage this season. Similar reports were, however, circulated last year, and nothing eventuated. The Rogers-Imperial gasser, section 29-1-11w4, is definitely good for 23,000,000 cubic feet a day, according to tests made after it had blown open some hours. The gas is practically dry and the ethane content is approximately 1.8 per cent, so that its value, even as a carbon black proposition, is doubtful. There is a small helium content, though considerably less than in the Barnwell and Bow Island gases. If further development is undertaken here it will perhaps take the form of a test lower on the structure, where there is a chance of striking oil without the impediment of a heavy gas flow to overcome.

South of Medicine Hat the Medicine Hat Petroleum Company test at Bullshead, section 14-11-6w4, has resumed work. This company has a standard outfit and started with a 20-inch hole for a deep test. In the Pakowki Lake arear the Chester P. Thompson syndicate (Sanctuary Oil Company) has cemented the bottom of the 6-inch casing to shut off water, but without much success, and the test may be abandoned at this horizan, after several years of drilling.

The Irma-Wainwright field is still the great center of activity. Here the Maple Leaf Oil Company is drilling a rather interesting test midway between the Fabyan No. 1 gasser and the Fabyan No. 2, in which only salt water was encounered. If there is oil in the field this test should logically be in a fair way to getting i. It should get the horizon corresponding to the gas horizon in Fabyan No. 1 in about six weeks. British Petroleum No. 3, section 29-45-6w4 is drilling. Western Consolidated Oil Company, section 20-45-6w4, is ready to spud in. Wainwright Oil Producers Syndicate, section 36-44-7w4, is in the last stages of rigging up. Other tests have been located, but no actual work has started on them.

West of Wetaskiwin the Globe Drilling Company, section 14-47-27w4, has opened up the unfinished Pigeon Lake well of the Mutual Oil and Gas Company and resumed drilling at 1200 feet. This well already has between 500,000 and 1,000,000 cubic feet of gas per day.

In Northern Alberta a merger of three companies in the Peace River field, the Victory Oil Company, Alberta Oil Company and Keystone Oil Company has taken place; the new company to be known as the Western Provinces Oils, Ltd. The Victory-Alberta's interests have a joint test close to the town of Peace River, while the Keystone took over considerable leases and equipment from the Peace River Petroleum, Ltd. Some new work may be undertaken. South and east of the Peace River district Prairie Oils, Ltd., of Toronto, drilling at High Prairie, is down 1100 feet and making hole rapidly. This is a test for both oil and gas, the latter to be utilized for carbon black manufacture.

Another carbon black proposition is being developed at Craigmyle near Delia, in Southern Alberta, where the Prairie Natural Gas Company has finished three small gassers at shallow depths, and is undertaking two additional tests.

On the McIntyre ranch near Magrath, the D. A. McDonald syndicate is rigged up for a deep test of the Milk River ridge structure, and will probably be drilling early in July.

Operators in Eastern Fields Expect Further Decline in Development Work

Pittsburgh, Pa., July 3.—Conditions throughout Eastern fields are not improving to any extent, and a further decline in new work is expected as soon as the present drilling wells are completed, due in the main to the recent drop of 50 cents per barrel in Pennsylvania crude. The lessening of new work is more noticeable in fields where the decrease in price is reported, which cover New York, Pennsylvania, West Virginia and southeastern Ohio. Kentucky grades dropped 25 cents per barrel. No changes have been recorded in the field of Northwestern Ohio, Indiana and Illinois. Central Ohio crude is also graded to a large extent by the Pennsylvania prices, and also got the 50-cent drop. The first week or so after the decline in price, field work showed hardly any decrease; but at this time it is clearly indicated that the operator realizes how little profit can be made with crude at the present price, and drilling tools will undoubtedly be closed down except where it is a case of necessity to conform with lease conditions.

Gasoline is moving more rapidly throughout the East, since this is the season when touring is at its height.

Only one completion was reported from the Pennsylvania field during the week, but New York is credited with five average producers. West Virginia wells are usually strippers, but the week brings forth two good wells in the Sherman district of Boone County, where the Pure Oil Company holds a vast acreage under lease; and the bringing in of a 145-barrel well in No. 12 on the Robson-Pritchard B. lease and No. 214 on the big lease known as the Robson-Pritchard, with 68 barrels, gave the state the two best completions for some time.

Kentucky failed to show anything better than a 75-barrel flush well found in the Allen County field of the western division of Kentucky on the Kerley lease at 259 feet. In Warren County, adjoining Allen County, the Baker-Jones Company struck a 50-barrel well on the Gillespie lease at 1071 feet. The Paragon Development Company drilled No. 2 Spear lease below all known producing sands in that section of the state, going to a depth of 1427 feet, without finding a commercial producer. In the eastern part of the state Lawrence-Johnson counties show four completions by the Union Gas and Oil Company, ranging from 10 to 30 barrels from the Weir sand at around 800 to 900 feet.

In the Southeastern Ohio field the East Ohio Gas Company drilled a wildcat well on the John McCullough lease in Freeport township, Harrison County, to a depth of 4908 feet, with no showing for a commercial producer, and is the deepest hole drilled in that part of the state. Central Ohio made a favorable showing the past several days by the completion of a number of excellent producers, the best of which was the Preston Oil Company's No. 11 J. and L. Stone lease, in Starr township, Hocking County.

What Vacuum Application Really Does

(Continued from page 44)

vacuum as much as to pressure of the water itself.

When vacuum of 20 inches is applied to the mouth of wells, there is a reduction of vacuum, of course, at the bottom of the well, depending upon the friction of gas up the casing and leaks, so that four or five inches less may be recorded at the bottom. Sixteen inches of vacuum equals about 8 pounds pressure so that water below is under 8 pounds less pressure. Considered as a whole, this pressure is negligible when considered with reference to water.

Evacuation of oil may cause trapping of oil between wells by "coning" water around the well which occurs whether vacuum is applied or not.

It is generally thought in the field that because high vacua is so difficult to secure and maintain and because it has such great effect upon gas, that its pressure relation and effect is greater than it really is.

When vacuum is applied gradually to a whole field, pressures over the whole sand will equalize in time and water trouble is not magnified under such conditions.

The general rule of conservation authorities is that vacuum can be applied only to partially depleted fields. Just what a partially depleted field is, has not been defined, consequently no general rule has been adopted as to the time that vacuum may be applied and the amount.

It is certain that vacuum increases immediate and ultimate production; a maximum realization calls for a careful study of the field from the date of the discovery well, when the necessity for vacuum becomes apparent at a definite time in any neld when a vacuum in the proper initial amount should be prescribed for the entire field, maintained uniformly, increased properly and uniformly at the proper time, as disclosed by field conditions.

As practiced, however, vacuum is carried by one producer as high as he can get it, when his neighbor raises his, and then the performance is repeated, perhaps by installing more equipment, resulting in vacuum unnecessary in the light of conservation; vacuum very expensive to secure and maintain, since the volume of gas increases materially with vacuum and plants installing equipment for high vacuum eventually have more units than necessary, unless high vacuum is used properly.

If a plant is laid out with such proportion and capacity that it will care for all the gas produced at atmospheric pressure at the well at the time the wells of the field are placed on the pump, as the gas reduces in quantity, vacuum will gradually increase, and conservation will have been served to a better extent than a haphazard competitive method of applying vacuum.

Contracts for gas usually specify that vacuum on the lease in question will be maintained at least equal to that carried by offset properties. If equal vacuum is not carried, the gas contract may be abrogated, resulting in further competitive operation.

Since gas, expanding within the sand, and doing work, as set out above, produces a refrigerating effect, this may be considered briefly. And, when gas in solution is vaporized, a definite amount of heat, taken from the oil and the sand itself, and disappearing in the gas as latent heat, results in further cooling. Both these effects lower the general temperature of a sand and the writer has noted this reduction several times over a period of years.

Where the critical point of any paraffin fraction is within the range of this temperature reduction, and some fraction usually is, some of the paraffin may congeal. The maximum cooling effect, however, is fortunately at the point of maximum pressure reduction, which is at the sand face, just as the oil and gas emerge from the sand pores into the well bore. At this point, most work is done, also, causing paraffin deposition upon the sand face. See an article by the writer in Oil Weekly of August 11 and 18, 1923, on "Overcoming Paraffin Troubles in Oil Wells."

This places such accumulations of paraffin within the well bore, within reach for removal, fortunately. Vacuum, however, is not the cause of all accumulations, since wells accumulate paraffin at all stages of production, during flowing, swabbing and pumping, whether vacuum is applied or not. Just to what extent vacuum affects paraffin accumulation is indefinite, since we cannot examine its deposition either while being deposited or afterward.

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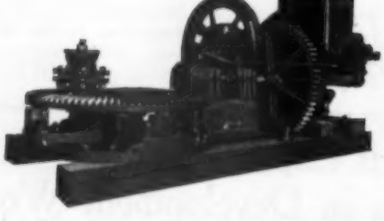

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Bulletin B-7

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Coastal Fields Show Busy Week With 22 Completions

Houston, Texas, July 3.—With a total of 22 completions for the past week and 17 producers out of this number, Coastal fields are starting the new month with a record that equals that of any previous month this year. It is very doubtful, however, whether or not the record for this week will be maintained.

Goose Creek, Hull, and Orange again took the lead in the amount of work reported. These fields have not shown a great deal of work for the past few weeks, but this week they report the bulk of completed wells, each reporting five completions. Hull had two dry holes and three producers; Orange showed four producers and one failure, and Goose Creek reported five new wells making oil.

Two deep tests were reported from Goose Creek. The Gulf Production Company's No. 7 Chapman Bryan showed 300 barrels when put on air at a depth of 4500 feet. John Gaillard Fee No. 16, a workover, made 400 barrels from 4300 feet, and is being produced by the same method as No. 7 Chapman Bryan. A third well belonging to the Gulf made 50 barrels from 3475 feet, after it was worked over. Gaillard 39, 21 acres, of the Gulf Coast Oil Company gauged 425 barrels from a sand at 2575 feet, and B. Smith No. 4, of the Sun Company, made 10 barrels after being worked over and cleaned out, from a depth of 2510 feet.

Orange claimed the record well of the week in Coastal fields, with No. 4 Lee Hager Fee, belonging to the Gulf Company, making 2100 barrels from 3450 feet. No. 15 on the same tract was good for 200 barrels from a deep sand at 4675 feet. The Humble Oil and Refining Company got a 15 barrel producer in No. 4 Winfree, a workover, at 3350 feet, and the Mutual Oil Company's No. 11 Chesson, a workover, made 15 barrels from a sand 25 feet deeper than the Humble's well. Kishi Development Company got a dry hole in its No. 2 Smith Foreman, a workover. The hole was drilled to 3425 feet before abandonment.

Two failures were reported from Hull. The Humble Company lost the hole in No. 5 Marshall, a workover, at 870 feet, and the well was given up as a bad job. Abel No. 1, a workover, of the Monarch Oil and Refining Company struck salt water at 2600 feet and had to be abandoned. The Gulf Company reported a 1350-barrel well in No. 11 Morris-Phillips, at 3250 feet. This production was obtained after the well had been worked over. Dolbear 85, of the Republic Production Company, made 500 barrels from 1300 feet, and the Yount Lee Oil Company got a 45 barrel well in its No. 9 Merchant.

For the first time in several weeks, Spindle Top failed to report any completions. Batson reported one producer, good for 26 barrels; Saratoga showed two five barrel wells; Sour Lake had one producer good for 45 barrels, and one salt water well; and West Columbia reported one producer and one salt water well.

Production for all Coastal fields is given as 73,945 barrels this week, as compared with 73,220 barrels last week.

Completions for Past Week in U. S. Fields

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Init. Prod. This Week	Init. Prod. Last Week
Oklahoma	91	102	67	59	10	4	14	39	17,446	15,518
Kansas	18	19	15	5	1	2	2	12	2,161	840
Texas	105	92	78	59	1	3	25	30	21,825	9,834
Arkansas	49	45	38	40	1	1	10	4	8,195	6,510
Louisiana	5	12	3	2	1	10	1	.....	215	15
Eastern States	110	126	70	75	21	28	16	23	1,372	1,390
Calif. (Southern fields only)	....	....	....	....	....	....	....	....	.....	.....
Totals	378	396	271	240	38	48	69	108	51,214	34,107

Texas

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Atlantic Oil Prod Co. W. F. Parrish 3	100	1677
W. F. Parrish 4	115	1570
Archer Oil Corp. J. H. Robertson et al 2	75	1411
Bridwell & Heydrick L. F. Wilson 5-F	80	1590
Camp Oil & Gas Co. et al L. F. Wilson 11-H	55	1600
Roy I. Carter et al J. H. White 1	100	1403
Day et al J. H. White 3	65	1449
Empire Gas & Fuel Co. L. F. Wilson 16-C	130	1625
L. F. Wilson 18-C	110	1623
Franklin et al W. F. Parrish 8	155	1603
W. F. Parrish 10	*	1612
Humble Oil & Ref. Co. S. F. Jones 1	*	1650
L. F. Wilson 2	30	1590
L. F. Wilson 3	125	1588
Humphries et al J. H. White 2	185	1618
Johnson et al J. B. Miller 1	*	1735
Jones Oil Co. L. F. Wilson 10	60	1630
Jones-Mitchell et al L. F. Wilson. 1	*	1615
Kentucky Oil Corp. et al Mrs. C. Waggoner 1	*	1805
Kimmel & Dillard K. & K. 8	25	953
McCarty Oil Co. L. F. Wilson 2-B	80	1587
S. McGregor et al Llewellyn 2	65	1410
Cliff Moore et al T. B. Wilson 2	*	1805
Murchison & Fain W. F. Parrish 1	*	1618
Richardson-Goldsmith 2	45	1355
Oil Investment Co. L. F. Wilson 1, (blk 62)	*	1655
Panhandle Ref. Co. B. M. Orton 2	200	1790
J. J. Perkins 1	*	1998
Prairie Oil & Gas Co. L. F. Wilson 8-E	150	1576
Sheldon & Hoyle H. L. & J. F. Ward 1	*	1000
Sun Oil Co. W. R. Farmer 5	55	1478
United Central Oil Corp. L. F. Wilson 2 (blk 29)	*	1638

BURKBURNETT

Company, Well and Location	Initial Production Bbls.	Depth
Fort Dearborn Oil Co. McClure	*	930
Gookin & Anderson Goetze 1	*	865
T. F. Hunter et al Cooper 1	*	1651
Magnolia Pet. Co. C. F. Collins 9	2	608
Hugh Reilly 103	25	1352
Staley et al Fee 10	35	1825

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
Burnett Ranch Oil Co. S. B. Burnet et al 2	225	1565
Carter & Fines J. A. Fisher 5	40	1575
Evans & Mimms J. A. Fisher 1	20	700
Humble Oil & Ref. Co. L. P. Douglas 16	150	1955
Magnolia Pet. Co. R. M. McFarlin 6	80	1685
McMan-Waggoner Bros. 6	10	664
Lanning & Monninger S. H. McCarty 3-DD	30	1338
Panhandle Ref. Co. S. H. McCarty 4	5	1793
Ryan Petroleum Co. G. E. Nance 21	300	1691
Rio Bravo Oil Co. Fee 4-E	125	1947
Section Two Oil Co. Burnett et al 1	250	1580
The Texas Co. S. Skinner 43	10	1800
United Central Oil Corp. G. E. Nance 1	165	1678
United Prod. Co. Fouch-Jennings 3	60	1466

K-M-A AND IOWA PARK

Company, Well and Location	Initial Production Bbls.	Depth
Electra Gulf Oil Co. Mrs. Murray 5	200	1770
Gardner-Eckerty & Harvey R. M. Peeler 1	520	1664
Petroleum Producers Co. Allen & Kemp 3-A	45	1638

CORSICANA POWELL

Company, Well and Location	Initial Production Bbls.	Depth
Simms Oil Co.'s Rose 15	36	1220
Texas-Magnolia's Kent 22	25	1660
Tidal Oil Co.'s Ramsey A-11	42	1605

RICHLAND

Company, Well and Location	Initial Production Bbls.	Depth
Max Gutman et al's Swink A-1	286	2995

SARGENT

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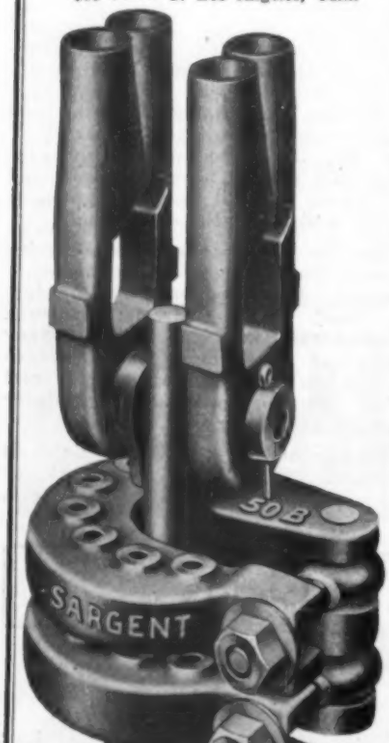

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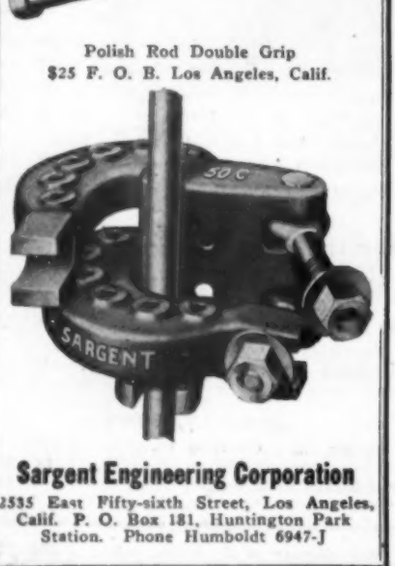

Sargent Engineering Corporation

2535 East Fifty-sixth Street, Los Angeles, Calif. P. O. Box 181, Huntington Park Station. Phone Humboldt 6947-J

Company, Well and Location	Initial Production Bbls.	Depth
Hallmark Oil Co.'s Webb 4	475	2966
Humble Oil & Refg. Co.'s Sheffield 1	380	2975
McDonald Bros.' Green 1	*	3205
Oxford Oil Co.'s Davis 1, wo	290	2970
Bob Smith et al's Green 1	*	2975
C. A. Tucker et al's Davis 1	2300	2970
GULF COAST		
Goose Creek—		
Gulf Coast Oil Co.'s Gaillard 39	425	2575
Sun Co.'s B. Smith 4, wo.	10	2510
Gulf Prod. Co.'s Chapman Bryan 7	300	4500
John Gaillard Fee 16, wo.	400	4300
Rucker-Schilling 5, wo.	* 50	3475
Saratoga—		
Skinner Prod. Co.'s Kirby 13	5	925
Cotton Oil Co.'s Gulf 4	5	1307
Batson—		
Ada Belle Oil Co.'s Lovitt 75	26	342
Sour Lake—		
The Texas Co.'s Fee 232, wo.	43	2125
Gilbert Oil Co.'s Fee 94	*	1750
Hull—		
Humble Oil & Ref. Co.'s Marshall 5, wo	*	870
Monarch Oil & Refg. Co.'s Abel 1, wo.	*	2600
Republic Prod. Co.'s Dolbear 85	500	1300
Yount-Lee Oil Co.'s Merchant 9	45	4250
Gulf Prod. Co.'s Morris-Philips 1, wo.	1350	3250
West Columbia—		
Sun Co.'s Robertson 5, wo.	*	3210
Gulf Prod. Co.'s H. Masterson 3, wo.	50	2550
Orange—		
Humble Oil & Refg. Co.'s Winfree 4, wo.	15	3350
Mutual Oil Co.'s Chesson 11, wo	75	3375
Kishi Dev Co.'s Smith Foreman 2, wo.	*	1425
Gulf Prod. Co.'s Lee-Hager Fee 4, wo.	2100	3450
Lee-Hager Fee 15	200	4675
DESDEMONA-GORMAN		
Flaherty et al, L. G. Ross 1	¶½	2860
EASTLAND-RANGER		
Donley Bros. C. S. Wheeler 1	20	1178
Jerome McLester et al S. R. Hunt 2	*	1250
Turner et al Steele 1	4	3535
Williamson et al N. C. Fox 2	*	1200
STEPHENS COUNTY		
Critten-Lacey et al S. C. Cobb 3	1200	3295
Curry Pool Oil Co. C. J. Williams 1	50	3315
Sun Oil Co. Carey A-9	15	1820
The Texas Co. Keathley 9	¶4-40	3152
SOUTH LOUISIANA		
Vinton—		
Wilson & Tucker's Parks 8	150	2600
Edgerly Pet. Co.'s Lisiol, wo.	50	3225

Oklahoma

	Initial Production Past	Prev.
Burbank Field—		
Prairie O. & G. Co.'s No. 15, C SE NW SW 13-27-5	200	3012
Midland Oil Co.'s No. 5, C W L NW SW NW 14-27-5	90	3079
No. 6, C NE SW SE 13-27-5	325	2980
No. 13, NWc 14-27-5	275	3103
No. 15, C N L NW NE SE 13-27-5	417	3012
Cosden O. & G. Co.'s No. 4, SWc 14-27-5	253	3080
No. 5, C W L NW SW SW 14-27-5	40	3120
No. 8, C NE NW SE 14-27-5	830	3046
No. 14, C NE SW SW 14-27-5	46	3120
No. 16, C SW NW SE 14-27-5	166	3061
Phillips-Skelly's No. 11, C S L SE SW SE 26-27-5	20	3009
Twin States' No. 9, C N L NW NE SW 18-27-6	200	2970
No. 15, C SW NE SW 18-27-6	75	2970
No. 16, C SE NW SW 18-27-6	275	2974
Carter Oil Co.'s No. 8, C SW NE SE 16-26-6	193	2980
Phillips Pet. Co.'s No. 15, C N L NW NE SW 11-27-5	1000	3019
Mid-Kansas' No. 2, C N L NE NW NW 26-27-5	50	3009
No. 3, C N L NW NE NW 26-27-5	75	3019
No. 4, NEc NW 26-27-5	15	3030
Caddo County—		
Gorton Trust Co.'s Waggoner 3, SWc SE SW 12-5n-9w	25	2403
Carter County—		
Wert Frankin's Akers 1, C NE NW 23-2s-3w	*	3050
Carpenter 1, C W L NE NE NW 23-2s-3w	*	2143
Davis 1, C S L NE NE NW 23-2s-3w	*	1870
Carpenter 2, C SW SE SW 23-2s-3w	¶	1880
Magnolia Oil Co.'s Smith 1-A, C SE SW SW 24-2s-3w	¶	1505
Lahman 5, C SE NE SW 23-2s-3w	100	2253
Lahman 3, C NE SE SE 23-2s-3w	¶	2393
Smith 1-C, C SE SW SW 24-2s-3w	*	3230
Simpson & Fell's McCrary 1, C SW NE NW 32-1s-3w	425	3075
Cotton Belt Oil Co.'s Sparks 7, C NE SE SW 32-2s-2w	50	2200
C. R. Smith's Davis 1, C NE SE SW 23-2s-3w	60	2502
Skelly Oil Co.'s Davis 2, C SE SW NW 23-2s-3w	¶	2205
Humble O. & R. Co.'s Williams 1, C NE SE NW 23-2s-3w	45	2530
Carpenter 1, C SE NE NE 22-2s-3w	90	2565
Cotton County—		
Lone Star Gas Co.'s Bendon 7, SWc NE 29-1s-9w	¶	2268
Creek County—		
W. J. Harman et al's Gooden 3, SWc NW 23-15-10	375	3153
Cumberland Pet. Co.'s Harry 1, NEc NW NW 27-15-10	385	2781
Wolverine Oil Co.'s Wilson 3, SEc NE NW 17-15-8	400	3817
Pure Oil Co.'s Yarhola 11, SWc NE NE 17-15-8	800	3796
Eastern Oil Co.'s Roberts 3, NWc NE SE 17-15-8	958	3756
J. E. Crosbie's Richard 1, C E L SE NW SW 25-15-7	70	3298
Carter Oil Co.'s Baker 2, C SE SW SE 21-17-9	50	2535
D. B. Mason's Broadnox 4, C E L NE NW 23-16-8	30	3191
Lorraine Pet. Co.'s Deere 12, C W L NW NE 23-16-8	100	3116
Peters Pet. Co.'s No. 2-A, NEc SW NW 22-16-8	25	3160
Waite Phillips' Harjo 2, SWc SE NE 24-17-8	¶	2740
Garfield County—		
Sinclair's Owens 6, NEc NE SW 30-22-3w	15	1550
Hoy 18, C E L SE NE 25-22-4w	50	2092
Morrison 7, C W L NW NE 31-22-3w	15	2259
Windler 9, C W L NW NW 30-22-3w	10	2325
Alamo O. & G. Co.'s No. 8, C NW NW 36-22-4w	40	2192
Healdton O. & G. Co.'s No. 26, SEc NW NE 24-22-4w	20	1915
Garvin County—		
Texas & Pacific Oil Co.'s Pearce 3, NEc NE SW 13-1n-3w	80	1591
Magnolia Pet. Co.'s Gibson 5, C NW SE SE 10-1n-3w	40	1590
Hughes County—		
Prairie O. & G. Co.'s Bruner 1, C NW NW NW 21-9-9	*	3050
Kingwood Oil Co.'s Davis 4, C NW NW SW 3-9-9	80	2986

Company, Well and Location	Initial Production Bbls.	Depth
Papoose Oil Co.'s Alexander 7, C NE SW SE 4-9-9	950	3309
Kay County (outside Burbank field)—		
Comar Oil Co.'s Hollenbeck 1, NEc NE SW 21-29-1w	¶	1909
Lincoln County—		
J. A. Hull's Benev. Assn.'s 5, C E L NE SW NW 12-14-6	1054	4176
McIntosh County—		
Kingwood Oil Co.'s No. 1, C W L NW SW 30-12-14	*	2913
Okfuskee County—		
Webster & Pine's Myers 3, SEc NE NW 3-11-11	¶	2285
Okmulgee County—		
Pat Clark's Grayson 1, SWc NE 15-11-13	*	2410
Waite Phillips' Murrell 4, C N L NW NE SW 23-13-11	180	2472
Prairie O. & G. Co.'s Leffart 1, SEc 17-13-11	600	2571
Misner et al's Gooden 3, SWc SE SE 32-15-11	40	2518
Guardian Oil Co.'s No. 6, C W L SE SW 7-15-11	*	3029
Montrose Oil Co.'s Willis 5, NWc SE SW 6-15-11	15	2630
E. R. Black's Larner 7, SWc NW SE 10-12-12	¶	2218
Wood Oil Co.'s Thompson 3, NWc SW SE 14-13-11	*	3263
Osage County (outside Burbank field)—		
Rogers et al's Cartwright 3, C E L NE NW 6-24-10	*	2352
Barnsdall Oil Co.'s No. 25, C N L NW NW 9-20-12	80	2044
No. 18, SWc 29-21-12	*	2002
W. R. Gray et al's No. 2, NWc NE 28-20-11	135	2390
Fidelity Oil Co.'s No. 5, C E L NE NE 16-21-12	6	1778
Marland Oil Co.'s No. 10-A, C E L NE NE SE 20-23-8	45	816
Breene-Markham et al's No. 7, C. S L SE NW NW 23-21-10	250	1601
Pawnee County—		
Wallace et al's Hennessy 1-A, C S L NW NE SW 24-20-8	55	2739
Johnson's Van Eman 2, NEc SW NE 17-20-7	150	2699
Jim Glenn's Jackson 3, SWc SE NE 16-20-6	150	3115
Privitt Drlg. Co.'s Conley 1, SWc SE 1-20-5	*	3366
Seminole County—		
McMann O. & G. Co.'s King 1, C NW SW NW 22-10-8	1680	3445
Independent O. & G. Co.'s Harjo 1, C SE NW NE 21-10-8	537	3573
Cromwell O. & G. Co.'s Roberts 1, C SE NE NE 16-10-8	2400	3522
Stephens County—		
Pure Oil Co.'s No. 4, SWc SE 35-1s-5w	5	685
Hassell 1, SEc SW SE 35-1s-5w.	10	591
Fisher's Worrell 2, C S L SW NE NW 22-1s-8w	156	2014
Base Line Oil Co.'s Alexander 4, NEc SE SE 25-1s-9w	*	2274
Mid-Kansas O. & G. Co.'s Simpson 2, SEc NE SW 18-2s-7w	*	2164
Smith-Law's Brymer 3, C W L NE NE 31-1n-8w	¶	1914
Tillman County—		
Continental Oil Co.'s Riverbed 7, NWc SE NW 8-5s-19w	50	1551
Tulsa County—		
Howard-Duffield-Berlin's No. 6, NWc 15-21-12	15	1332

Kansas

Company, Well, Location—	Initial Production Bbls.	Depth
Butler County—		
Blue Stem Oil Co.'s McLean 2, C E L SE SW 5-27-6	150	2729
Cowley County—		
Waite Phillips et al's Johnson 2, C NE NW SE 20-33-3	750	3218
Southwestern Pet. Co.'s Eastman 3, C N L NW NE 6-31-6	730	2883
Shawver & Sutter's Newton 2, C SE NW NE 15-30-4	80	2790
Elk County—		
J. E. Huff et al's Thorp 1, C NE NE 33-30-10	*	2190
J. F. Denton et al's Denton 2, C NE SW 34-29-9	¶	1478
Greenwood County—		
Cosden O. & G. Co.'s Sullivan 8, NWc NE NE 14-24-12	6	1769
Selby O. & G. Co.'s Harris 1, C NE NW NW 19-22-11	20	2088
Rhodes et al's Pees 5, C W L SW NE 17-22-10	20	2350
R. G. Gillespie's Browning 3, C NW NE NE 19-22-10	150	2347

Company, Well, Location—	Initial Production Bbls.	Depth
Mid-Kansas' Scott 5, C SE SW SW 23-23-10	50	2308
Houston & Okla. Oil Co.'s Sullivan 3, SEc SW NW 14-24-12	30	1812
Sullivan 4, NEc SW NW 14-24-12	60	1784
J. Phillips & Reynolds' Christy 1, SWc NW NE 4-25-11	*	2315
Franklin Oil Co.'s Johnson 1, SEc NE NE 15-24-12	50	1754
Plains Pet. Co.'s No. 2, SEc SW NE 11-25-8	20	2317
Leonard Pet. Co.'s Holverson 2, SWc 23-24-9	25	2199
Roth & Mission Oil Co.'s Cartwright 1, SEc NE 1-24-9	20	2350

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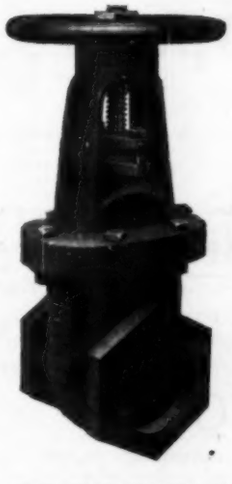

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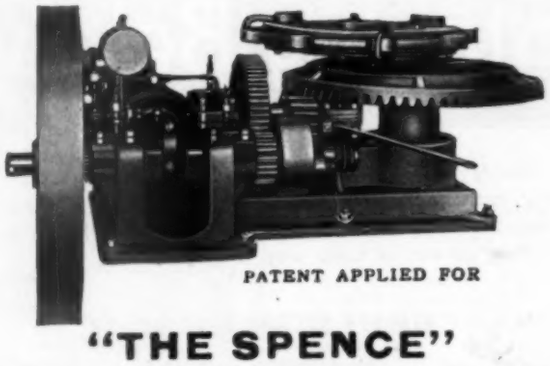
GRINNELL CO., OF THE PACIFIC, Los Angeles, California

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Smackover Field, Ouachita County—		
Arkansas-Invincible Oil Corp.'s McRae 4, 30-15-16	45	2260
Burton Trust's Hughes 9, 21-15-16.	100	2280
Forrest Oil Co.'s Mullins 1, 28-15-16	*	2100
Mullins 9, 27-15-16	*	2095
Gulf Refining Co.'s R. Bennett 2, 33-15-16	¶5	2000
T. C. Patton 4, 32-15-16	50	2258
Solmson 9, 29-15-16	50	2260
Gilliland Oil Co.'s McRae 2, 25-15-17	50	2240
Wells S-2, 25-15-17	40	2285
Home Refining Co.'s Anderson 4, 26-15-17	70	2340
Marr et al's Mullins 4, 28-15-16	*	2035
Natural Gas & Pet. Co.'s Hughes 1, 28-15-16	100	2265
Smitherman & McDonald's Saxon A-15, 32-15-16	*	2704
Standard Oil Co.'s Griffin 3, 33-15-15	100	2015
Staves et al's Jeffries 1, 26-15-17	35	2355
The Texas Co.'s Snow 6, 30-15-16	75	2290
Smackover Field, Union County—		
Amerada Pet. Co.'s Giller 4, 15-16-15	*	2290
Cherokee Pet. Co.'s Burton 2, 25-16-16	1500	2058
Cox et al's Burton 2, 30-16-17	*	2200
Crawford & Sebastian's Giller 6, 14-16-15	*	2285
Groves 3, 3-16-15	150	1975
Federal Pet. Co.'s Smith 4, 18-16-15	150	2087
Gulf Ref. Co.'s Hedgewood 1, 13-16-16	80	2115
W. H. Gilliland et al's Hodges 3, 1-16-17	35	2255
Higgins Oil & Fuel Co.'s Hicks 4, 20-16-15	275	2094
Holliday Trust's Groff 2, 6-16-15	50	2255
Humble Oil & Ref. Co.'s Moore 4, 19-16-15	170	2050
Isola Oil Trust's Mathews 1, 34-16-14	*	2257
Kinnebrew et al's Williams 2, 3-16-15	100	1975
Kouri et al's Moore 1, 24-16-15	100	2077
Lion Oil & Ref. Co.'s Hedgewood 4, 24-16-16	350	2070
Livingston et al's Roper 5, 3-16-15	250	1978
McFarland et al's Groves 3, 3-16-15	800	1980
Pherris et al's Goodwin 1, 26-16-15	*	2045
Pure Oil Co.'s Dumas 3, 16-16-15	100	2063
Stocks 3, 20-16-15	100	2075
Ramage et al's Hedgewood 4, 24-16-16	500	2050
Schuller et al's Henderson 2, 19-16-15	100	2082
Standard Oil Co.'s Alphin 14, 2-16-15	125	2000
Hardy Murphy 19, 4-16-15	40	2025
Stewart et al's McKinney 4, 19-16-15	175	2065
Sure Oil Co.'s Smith 3, 24-16-15	550	2097
The Texas Co.'s Anderson 3, 19-16-15	80	2310
Unity Pet. Co.'s Alphin A-6, 24-16-16	1200	2105
Weatherbee et al's Rice A-2, 6-16-16	250	2265
Winger et al's Giller 2, 21-16-15	100	2085
Woodley Pet. Co.'s Alphin 4, 24-16-16	125	2054
Total, 47 wells	¶5-8120	
El Dorado East Field, Union County—		
Morgan et al's Ezell 2, 12-17-15	*	2880
Terry Summerfield Oil Co.'s Smith 5, 20-17-14	75	2230
Total, 2 wells	75	



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PARKERSBURG W Va.

Louisiana

Company, Well and Location	Initial Production Bbls.	Depth
Bellevue Field—		
Olmstead et al's Strange A-16, 23-19-11	*	330
Caddo District—		
Rush & Brown's Rudersdorff 1, 11-20-16	15	2360
Monroe Gas Field—		
LaDel et al's White 2, 30-20-5e	¶10	2285

Eastern States

PENNSYLVANIA

Sharon Center Field—		
Millport Gas Co. Millport 1	¶2½	....

NEW YORK

Richburg Field—		
Matson & Funk Lester lot 8	7	....
Bolivar Field—		
A. C. Shaner & Co. Jasper Johnson 1	6	....
Jordan Hill Field—		
Wilson, Putnam & Son Cass 1	5	....
Pleasant Valley Field—		
LeSuer & Williams Pierce 1	5	....

WEST VIRGINIA

Gilmer County—		
Hope Natural Gas Co. Louis Bennett 2	¶3	....
James A. Tierney Tierney 3	¶1	....
Morris & Gaines M. B. Zinn 2	*	....

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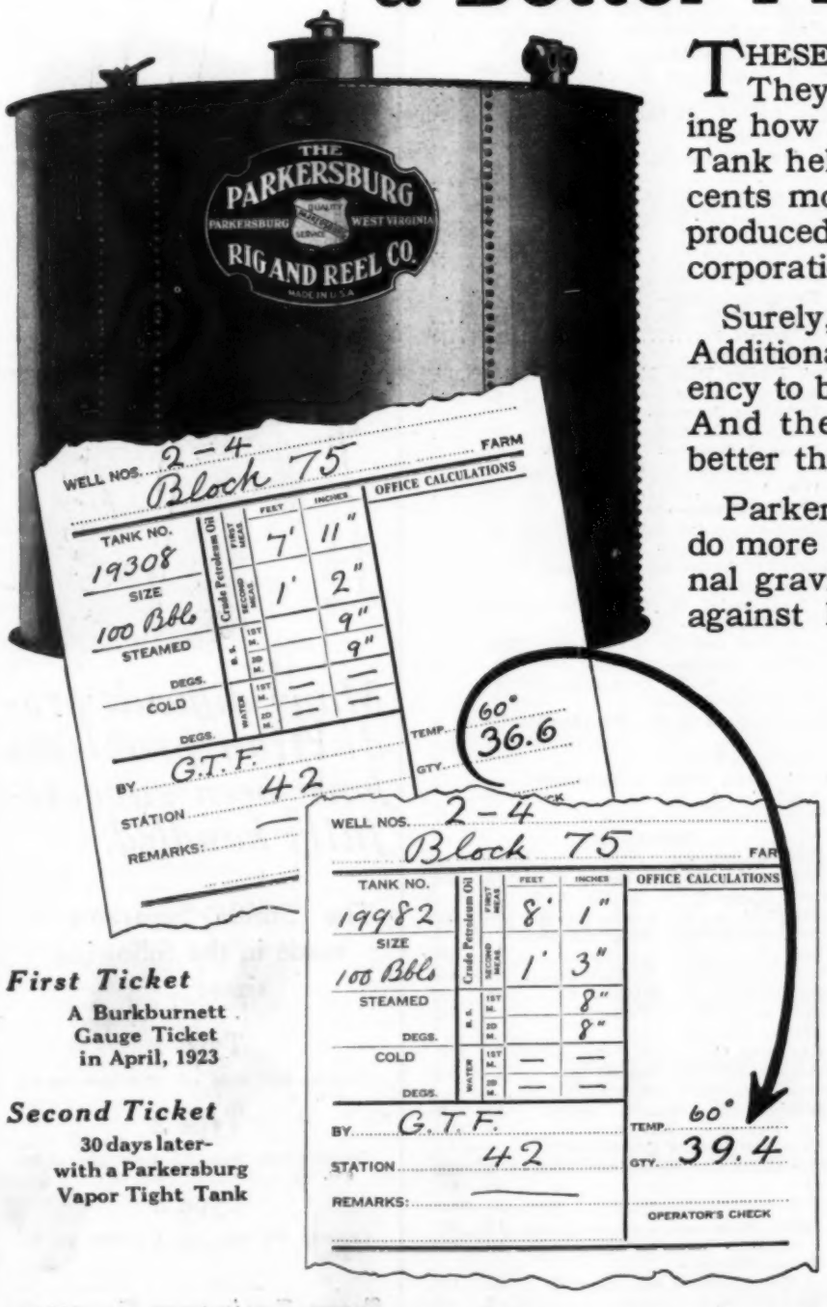

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California Representatives, BUCK & STODDARD
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Westbrook

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‡Rawlins

LOUISIANA
*Shreveport
Haynesville

KANSAS
*Eldorado
Madison

WEST VIRGINIA
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Clarksburg

OKLAHOMA
*Tulsa
Bristow
Drumright
Holdenville
Hominy
Okmulgee
Wetumka
Tonkawa
Wilson
Shidler
Stroud
Wewoka

ARKANSAS
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Louann
Smackover
McNeil

MONTANA
Sunburst
†Winnett

*District Offices ‡Frick-Reid Supply Co. †Continental Supply Co.

NOTICE OF RECEIVER'S SALE OF REAL ESTATE

The undersigned receiver of the Portland Oil and Refining Company in obedience to an order of the Jay Circuit Court of Jay County, Indiana, duly entered of record on the 9th day of June, 1924, in the cause wherein Wilda T. Rice is plaintiff and the Portland Oil and Refining Company is defendant, Cause Number 18699 entered of record by said court, the receiver will offer for sale and will sell at public sale on premises about one mile north of the public square in the City of Portland, Jay County, Indiana, on Thursday, the 10th day of July, 1924, between the hours of six o'clock A. M. and four o'clock P. M. of said day, the entire plant of said Portland Oil and Refining Company consisting of the following real estate:

All that part of the Southeast quarter of the northwest quarter of section sixteen (16), Township twenty-three (23) North of Range fourteen (14) East in Jay County, Indiana, lying west of the right of way of the Cincinnati, Richmond and Ft. Wayne Railroad. Also a part of the Southwest quarter of the Northwest quarter of said section, township and range aforesaid described as follows: commencing at the Southeast corner of said quarter thence west four (4) rods; thence North eighty (80) rods; thence east four (4) rods; thence south eighty (80) rods to the place of beginning; tools, pipe, pipe lines and connections, fittings, stills, machinery, tanks, trucks, and all of the real, personal and mixed property located at their said plant on the following terms and conditions to-wit: the said sale to be by sealed bids, four weeks after the date of the first publication, to the highest bidder subject to the approval and order of the court. One-third cash to be paid within ten days, one-third in ninety days and one-third in six months from the date of sale. The deferred payments to be evidenced by notes bearing six per cent. interest from date secured by mortgage on the property sold. All beneficial executory contracts to be included now held by said Portland Oil and Refining Company to be sold and assigned by said receiver upon full performance of the conditions of the sale of said property. All bidders at said sale of said property in order to qualify to bid on said property at said sale shall deposit with said receiver at the time of filing their bids a certified check or draft for One Thousand ($1000.00) Dollars payable to said receiver conditioned that the bidder will perform and complete the terms of his bid by full payment of the price bid according to the terms of this order of sale and which check shall be applied by said receiver on the cash payment of the successful bidder on said property. Said checks or drafts to be returned by said receiver to the unsuccessful bidders. It is further ordered by the court that said sale shall be free from any liens upon said property said liens shall attach to the fund realized from said sale as the same shall hereafter be determined by said court.

E. E. EMMONS, Receiver.
Smith & Jay,
Attorneys for Receiver.
June 10-17-24.

Company, Well, Location—	Initial Production Bbls.	Depth
Putnam County—		
United Fuel Gas Co. P. H. Youngs 1	¶4	....
Sovereign Gas Co. Martha E. Lawson 1	¶4	....
Rehman & Staunton Milton Goode 1	¶3	....
Boone County—		
Pure Oil Co. Robinson-Pritchard B. tract 12	145	....
Robinson-Pritchard 214	68	....
Pleasants County—		
W. J. McCullough & Co. E. C. Owens 1	¶2	....
Hope Natural Gas Co. Unkonwn 1.	3	....
Wirt County—		
W. C. Patterson & Co. M. A. Donoho 15	5	....
L. E. Schuck & Co. W. H. Wheaton 8	2	....
Ritchie County—		
Penn Royal Oil Co. I. E. Jackson 5	2	....
Liberty Oil Co. Mary A. Deem 6..	¶2	....
Kanawha County—		
United Fuel Gas Co. M. Burgess 1	¶¼	....
B. Jarrett 1	¶1	....
Wood County—		
Park Bowser Dora Rice 1	¶¼	....
Bowser & Ekas Saldon Rice 1	¶2	....
Doddridge County—		
Gay Zion & Co. Mary J. Manier 1..	10	....
Marshall County—		
Deep Development Co. Campbell Hrs. 3	10	....
Lincoln County—		
Columbia Gas Co. Wiser Adkins 1	¶2	....
Harrison County—		
Vesper Oil & Gas Co. Abe Myers 1	¶¼	....
Tyler County—		
L. L. Gorrell J. E. Slider 1	¶¼	....
Roane County—		
United Fuel Gas Co. J. P. Young 1	¶2½	....
Calhoun County—		
Heck Oil Co. W. T. Price 1	¶3	....
Nicholas County—		
Hamilton O. & G. Co. Hookersville 1	¶½	....
Clay County—		
H. C. Zogg, Trustee, Thompson Land Co. 1	¶1	....
KENTUCKY		
Allen County—		
Neil-Heubring Oil Co. Kerley 8	75	259
White Plains O. & G. Co. J. L. French 4	30	388
Central Producing & Refg. Co. Barbee 12	4	270
Vitcor DeCaigney S. T. Allen 25	*	460
Cunningham & Co. Mayhew 13	*	400
France & Co. T. O. Taylor 1	*	372
Warren County—		
Baker-Jones Oil Co. Gillespie 3	50	1071
Kakeever Bros. Sandige 24	35	566
Wiles-Essix Petroleum Co. H. V. Smith 5	30	1246
B. B. Rice & Co. McFadden 1	3	1253
Lawrence-Johnson Counties—		
Union Gas & Oil Co. Andrew Skaggs 15	20	817
J. J. Gambill 32	20	823
James Dials 5	15	827
J. M. Fyffe 15	10	809
Barren County—		
Houchins Leasehold Co. Mansfield 5	20	535
Mayfield 6	5	581
W. R. Jackson Creek 1	10	600
Carter Oil Co. Winninger 2	8	552
Cumberland County—		
E. M. Trea & Co. Dickens 5	*	600
Paragon Dev. Co. M. L. Speer 2	*	1427
SOUTHEASTERN OHIO		
Noble County—		
O. O. Kinsey Elmer Hurson 3	5	....
Porter & Co. Henry Wepler 1	2	....
Cain-Devoll Oil Co. L. M. Devoll 8	2	....
Harrison County—		
Frank Quinn Arbaugh-Gaetchell 10	2	....
A. L. Vorhees Vern Campbell 1	*	....
East Ohio Gas Co. John McCullough 1	*	5908
Columbiana County—		
John Davidson Davidson 2	2	....

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Company, Well and Location	Initial Production Bbls.	Depth
Meigs County—		
Jaffler Oil Co.'s Stella Holter 1....	¶2	....
Morgan County—		
Daily Oil Co. C. C. Crider 1.....	10	....
Monroe County—		
W. T. Hummell Hummell 4.....	2	....
Muskingum County—		
Mideast Oil Co. O. B. Kroft 1.....	¶¼	....
Washington County—		
Perry Davis & Co. Dan Ludwig 1..	*	....
CENTRAL OHIO		
Athens County—		
Neely, Murray & Co. A. A. Atkinson 2	25	....
R. W. Jones 2.....	*	....
E. McKnight 1 .....¶3½		....
Fisher Oil & Gas Co. Mary Allen 1	¶3	....
Sarah E. Penrod 1.....	15	....
Hocking County—		
Preston Oil Co. J. & L. Stone 11..	110	....
J. & L. Stone 12.....	10	....
Kachelmacker Estate J. J. Tracey 11	50	.....
Lupher Producing Co. J. H. McClain 6	*	....
Perry County—		
Sunday Creek Coal Co. Fee 117....	60	....
Planet Oil Co. D. B. Dittoe 2....	90	....
Carter Oil Co. Sophia Miser 7.....	5	....
Calking O. & G. Co. W. R. Calking 2	2	....
Licking County—		
Edward H. Everette Co. F. & K. Haynes 2	25	....
P. M. Brill 2	*	....
E. J. Edmonds & Co. Robert Stair 1	3	....
Pure Oil Co. Edward Hickey 1....	15	....
Knox County—		
Arkansas Fuel Oil Co. L. O. Dugan 4	5	....
NORTHWESTERN OHIO		
Wood County—		
Ohio Oil Co. Chas Mercer 21.....	45	1345
Dan N. Easley '6	20	1345
B. C. Calkins C. & M .Lapointe 2..	12	1530
Mrs. Clarence Potter C. Potter 19..	20	1280
Raney-Sage Oil Co. W. M. Mercer 2	20	1560
H. L. & P. Oil Co. F. Steen 1.....	7	1498
J. B. Heimhoffer Heimhoffer 1.....	5	1515
Ottawa County—		
T. F. Lewis & Co. Magee & Magee 8	18	1306
Babione Oil Co. Christian Neeb 5...	4	1340
Ohio Oil Co. Genskey 9.....	8	1400
Allen County—		
Ohio Oil Co. Nellie McBride 6....	15	1310
W. O. Huntley John Etgs 2.....	15	1314
Hancock County—		
Ohio Oil Co. S. D. Spitler 11.....	15	1403
Miranda Wolfe 7	6	1510
Mercer County—		
Strong Bros. F. V. Bollenbaugh 13.	5	1283
Watson Oil Co. J. A. Tingley 13....	5	1264
Auglaize County—		
Waller Oil Co. Mrs. Dingledine 2..	3	1298
Grover Lynch & Co. George Blank 1	*	1300
INDIANA		
Gibson County—		
Loeb, Fought & Co. C. Dawson 2..	*	1338
Mann, Huber & Tichenour O. M. Welborn 3	50	1421
Sullivan County—		
Bacus Oil Co. Goechenour 1.....	*	724
Fred Bays J. W. Huff 1.....	¶¼	824
Knox County—		
Like & Co. C. S. Cooper 1.....	*	1230
ILLINOIS		
Wabash County—		
Arkansas Fuel Oil Co. A. Canady 1	16	1560
Crawford County—		
McDowell & Geary J. W. Rich 9..	10	987
Clark County—		
Peoples Banking & Trust Co. J. Claypool 4	2	525
Marion County—		
Bays & Co. Scheffendecker 1.....	1	800

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Permits Granted and Locations for New Wells

(Kansas—Oklahoma—Texas—Arkansas—Louisiana)

KANSAS

Butler County—Sanford et al No. 1 Harder, southeast corner of 21-24-3.

Chase County—Phillips Pet. Co. No. 1 Hughes, center of the northwest of the southeast of the northwest of 10-22-9.

Cowley County—Murphy et al No. 1 Block, northwest corner of the southwest of the northwest of the northeast of 21-32-6. Day Bros. No. 1 Able, northeast corner of the northwest of the southeast of 31-33-4.

Elk County—Barber & Rhoten No. 1 Perkins, southeast corner of 36-29-9.

Ellsworth County—Kirkland & Kline No. 1 Kottman, northeast corner of 3-14-9.

Franklin County—Grant Colby No. 1, southwest corner of the northeast of 5-16-18.

Greenwood County—Gordon & Edwards No. 1 Sheppard, southeast corner of the northeast of the northwest of 11-22-10. Rhodes & Able No. 1 Hughes, southeast corner of the southwest of 18-22-10. Rhodes & Able No. 1 Browning, southeast corner of the southwest of the southeast of 18-22-10. R. G. Gillespie No. 6 Browning, southwest corner of the northeast of the northeast of 19-20-10. Empire No. 2 Duby, southwest corner of the northwest of the southwest of 14-22-11. Rogers et al No. 6 Cartwright, center of the west line of the northwest of 6-24-10. Pierce et al No. 1 Jackson, southwest corner of the northwest of the northeast of 25-25-8. Bason et al No. 1 Corrington, center of the east line of the southeast of the southeast of 5-25-9.

Russell County—Valerius O. & G. Co., Oswald 3, southeast corner of the southwest of 8-12-15. Valerius No. 2 Oswald, northeast corner of the northwest of 17-12-15w.

OKLAHOMA

Caddo County—Bristow & Hall No. 3 Headlands, NEc SE NE 11-5-9w.

Beckham County—Lyons et al's No. 1 Vector C NW NW SW 24-8-22w.

Carter County—Wirt Franklin No. 2 Carpenter, C SW SE SW 22-2-3w. Magnolia Pet. Co., No. 7, Layman, C SW NW SE 23-2-3w. Cameron Refining Co., No. 2, Walker, C SL NE SW 24-2-3w. Schermerhorn No. 1B, Dickerson, C SW SE NW 4-3-2w. Wirt Franklin No. 2, C SE NW SW 4-3-2w. Magnolia Pet. Co., No. 3, Lehman, C NE NW SE 23-2-3w. Magnolia Pet. Co., No. 5, Swartz, C NE SE NE 25-2-3w. Schermerhorn No. 1, McGill, C NW NE SE 8-3-2w. Merrick et al's No. 1A, Cobb, NW¼ 5-3-2w, twin lcn to No. 1. Cotton Belt Oil Co., No. 11, Rexroat, NW¼ 15-4-2w; located 50 feet west of No. 10. Carter Oil Co., No. 46, Noble, NE¼ 21-4-2w, 45 feet north of No. 1.

Creek County—Eastern Oil Co., No. 2, SWc NW 16-15-8. Frank Moore No. 2, NWc NE SW 16-16-9. White Oil Corp., No. 1, SWc NE 2-14-8. Tibbens No. 2 Brown, C SW SE SW 12-14-8. George W. Davis et al's No. 1, NEc SE SE 23-14-9. Barber Oil Co., No. 1, Simons, NEc SE 1-15-10. H. C. Wilson No. 1, SEc NE 1-15-10. Waite Phillips No. 5, NEc 23-17-8. Cortez Oil Co., No. 3, Gilbre, SWc NW NW 2-18-17 (old well deepening).

Cotton County—Fisher et al's No. 1, Day, C SW NW 13-5-13w. Woods No. 1, Wolf, C SE SW SE 22-5-12.

Garvin County—Magnolia Pet. Co. No. 5, Gibson, C SW NE SE 10-1-3w. Texas Pacific Coal & Oil Co., No. 3, Pierce, NEc SW 13-1-3w.

JEFFERSON COUNTY—Prairie Oil & Gas Co., No. 1, Seacy, C SW NW SW 34-6-5w. Humble Oil & Ref. Co., No. 1, Seacy, C NE NW SE 1-7-6w. Couch et al's No. 1, Seacy, C NE NE NW 4-7-5w. Texas Co.'s No. 1, Seacy, NEc SE NE 5-7-5w. Sykes, Heenan & Poe No. 1, Reed, C NW NE NW 19-7-5w.

Kay County—McCaskey & Wentz No. 46, McKee, C NE SE SW 34-25-1w. Pennock Oil Co., No. 3-D, Endicott, SEc SW SW SW 34-25-1. Pennok Oil Co., No. 6-D, Endicott, SEc SW SE 24-25-1w.

Kingfisher County—Boyd Oil Co, No. 1, Bastin, C E L NE SE 31-15-7w.

Logan County—Gilliland Oil Co., No. 1, Meyer, SEc NW NW 5-19-2w.

Okfuskee County—Shaffer Oil & Refining Co. No. 1, Grayson, NEc SE NW 30-11-10.

Okmulgee County—Ice et al's No. 3, Munnell, C W L NW NW 26-13-11. Denver Producing & Ref. Co., No. 4, Thomas, C E L SE NE 32-13-11. Newman & Phillips No. 1, Robinson, NEc 29-14-12. Barber Oil Co., No. 1, C E L SE SW 35-14-12. Stein et al's No. 4, Avery, C W L NW NE 28-14-14. Waite Phillips No. 2, NEc NW SW 14-15-11. Vollentine & Aggas No. 1, Sugar, SEc SW NE 26-15-13. Wilcox & Oswalt No. 2, SWc NW SW 1-16-11. Crosbie et al's No. 15, NEc SW 10-16-11. Meridan Oil Co., No. 1, SEc NE SE SE 23-16-11. Sheldon et al's No. 1, NWc 34-16-11.

Pawnee County—Magnolia Pet. Co., No. 1, Burgman, NEc NW SE 16-20-6.

Payne County—Carter Oil Co., No. 2, Douglas, C NE NW SE 17-19-6.

Seminole County—Holmes & Jarvis No. 1, Cobb, NEc SE NE 7-9-8. Gardener & Cromwell No. 2, Bruner, C SW SE SW 9-10-8. Cromwell No. 1 Robert, C SE SE NW 16-10-8. Gilliland-Livingston No. 5, Proctor, C NW NW NE 16-10-8.

Stephens County—Gant et al's No. 1, Amstead, NE¼ 5-1-8w. Magnolia No. 7, Stephens, NEc NW NW NW 33-1-8w. Stephens No. 1, Ballard, SEc NE SE NW 4-1-7w.

Tulsa County—Enfisco Oil Co., No. 1, C W½ E½ E½ NW 4-19-12. Charles Page No. 3, C N L NW NE 7-19-112. Thompson & Black No. 2, C E L NE NE 7-19-12. Allen et al's No. 1, NWc SW NW NW 8-19-12. Allison et al's No. 1, C NW NW NW 8-19-12. Brook & Hancock No. 1, NWc SW NW NW 8-19-12. Calvin Belt Co,, No. 1, located 475 feet from the north and 320 feet from the west line of NW¼ 8-19-12; offsetting the Allison et al's No. 1, in the same section to the north. Hartman & Williams No. 1, located 475 feet from the north and 190 feet from the west lines of the NW¼ of 8-19-12. Henry Oil Co., No. 1, 450 feet from the north and 220 feet from the west lines NW¼ 8-19-12; No. 2, same parties, 500 feet from the north and 50 feet from the west lines of the NW¼ 8-19-12. Morgan et al's No. 2, 400 feet from the north and 300 feet from the west lines of the NW 8-19-12. Simons et al's No. 1, C E L NW NW 8-19-12. Eppler et al's No. 1A, SEc NE NE 30-19-12. Oklahoma Producing & Refining Corp., No. 4, SEc SW SE 18-19-10. Swoveland et al's No. 1A, SWc NE 1-19-10.

Wagoner County—Schooley et al's No. 2, NEc SE 15-17-16. Dowd et al's No. 2, SWc NW NW SE 14-17-16. Gillman et al's No. 1, NEc NW SW 14-17-16.

Lincoln County—Berry et al's No. 1, Key West townsite, Block 4, lot 12, NW¼ 12-14-16. Hoyt & Vickers No. 1, Key West townsite, block 4, lot 24, NW¼ 12-14-6. C. F. Noble No. 2, Key West townsite, Lot 14, located approximately in the NEc SW NW 12-14-6.

LOUISIANA

Bossier Parish—Geo. W. Wetherbee's Fee F-1, 23-19n-11w, 640 ft S and 145 ft E of NW cor. SE¼ of SW¼.

Caddo Parish—The Proven Production Co., Inc.'s Agurs 1, 6-16n-16w, 2400 ft N and 400 ft W of SE Cor. of Sec.

Calcasieu Parish—Gulf Refining Co. of La.'s Star-Vincent 32, 34-10s-12w, 1600 ft N and 720 ft E of SW Cor. of Sec.

Evangeline Parish—Invincible Oil Co.'s S. Manuel 1, 35-5s-2e, 930 ft S and 330 ft E of SE Cor. of the Armand Manuel 100 acre tract.

La Salle Parish—Fred Stovall, Tr.'s La. Central 2, 27-10n-2e, 2042 ft E and 2052 ft S of NW Cor. of Sec. Urania Pet. Co.'s Urania 4, 20-10n-2e, 300 ft W and 300 ft N of SE Cor. NW¼ of SE¼.

Morehouse Parish—Amalgamated Co.'s Fairley 2, 53-20n-4e, 545 ft N and 1002 ft W of NE Cor. of Sec.

Ouachita Parish—The Palmer Corp.'s Lieber 2, 4-19N-5E, 660 ft S and 660 ft E of NW Cor. of Sec.

Sabine Parish—L. M. Emlet's Bowman-Hicks 1, 15-7N-12W, 639 ft S and 87 ft E of NW Cor. NW¼ of SW¼; Bowman-Hicks 2, 16-7N-12W, 455 ft S and 42 ft W of NE Cor. NE¼ of SE¼.

Union Parish—The Texas Company's Grayling Lumber Co. B-1, 2-21N-4E, 1320 ft S and 247 ft E of NW Cor. of NE¼. Associated Oil Co. of La., Breazeal 1, 30-23-1W, 990 ft N and 2310 ft W of SE Cor. of Sec.

Webster Parish—Invincible Oil Co.'s Chrichton 1, 21-21N-10W, 330 ft N and 330 ft W of SE Cor. NE¼.

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana and Texas:

State—	Number of New Wells for Week Ending												
	Apr. 5	Apr. 12	Apr. 19	Apr. 26	May 3	May 10	May 17	May 24	May 31	June 7	June 14	June 21	June 28
Kansas	15	9	15	19	12	7	21	61	27	18	..	..	17
Oklahoma	101	108	144	126	62	140	17	80	124	68	61	81	78
Arkansas	37	56	45	71	37	71	57	35	39	36	22	33	24
Louisiana	11	19	8	20	8	17	12	16	13	13	11	14	13
Texas	142	203	173	125	215	171	142	192	162	117	104	145	132
Totals	306	395	385	351	334	421	303	384	365	215	198	273	264

ARKANSAS

Ouachita County—Anderson et al's Anderson 3, 26-15-17, 200 ft S and E of NWc NE¼. Arkansas Drlg. Co.'s Reynolds 3, 24-15-17, 200 ft S and W of NEc NW¼ SW¼. Atlantic Oil Prod. Co.'s Brierton C-2, 24-15-17, 990 ft N and 200 ft E of SWc of Sec. Bray & Hawthorne's Copenhagen 1, 13-15-17, lcn not checked. J. E. Crosby et al's Berry 2, 33-15-15, 300 ft N and E of SWc SW¼ NE¼. Forrest Oil Co.'s Minor 2, 20-15-16, center south line SW¼ SE¼. Gilliand Oil Co.'s W. A. Smith 3, 26-15-17, 200 ft S and E of NWc SE¼ SE¼; N. Wells 3, 25-15-17, 200 ft N and E of SWc SE¼ NE¼. R. B. Nelson et al's Anderson 3, 26-15-17, 200 ft N and E of SWc E½ SW¼ NE¼. Stumpff & Todd's LaGrone 3, 30-15-16, Lot 6, Blk 7, townsite. The Texas Co.'s Berry 5, 33-15-15, 300 ft S and E of NWc SW¼ NW¼; Stringfellow 5, 28-15-16, 200 ft N and E of SWc NW¼ SW¼.

Union County—Bradley & Cazart's Miles 1, 21-17-15, SW¼ NE¼, in townsite. Gulf Ref'g Co.'s Hedgewood 2, 13-16-16, 200 ft N and E of SWc SE¼. Holliday et al's Goff 4, 6-16-16, 200 ft N and E of SWc NW¼ NW¼. Hollifield et al's Burton 2, 30-16-15, 200 ft S and E of NWc of Sec. Humble Oil & Ref'g Co.'s J. S. Smith 3, 18-16-15, 1520 ft N and E of SWc of Sec. Lemond et al's Terrell 1, 22-18-14, NWc NW¼ SE¼. Ohio Oil Co.'s Scott 1, 19-16-15, 200 ft S and E of NWc NW¼ SE¼; Scott 2, 19-16-15, 200 ft S and W of NEc NW¼ SE¼. Pure Oil Co.'s Lindsey 1, 29-16-15, 200 ft S and W of NEc. J. Seip's Hedgewood 2, 24-16-16, 200 ft S and E of NWc NW¼ NE¼. Sure Oil Corp.'s Smith 8, 24-16-16, center north line of tract in NE¼ NE¼. United Central Oil Corp.'s Craig 1, 15-16-15, 200 ft S and W of NEc SW¼ SE¼.

TEXAS

Archer County—Kimbrough & Miller's J. J. Perkins A-3, D. C. S. L. No. 3 sur, blk 20, 300 ft S No. 1. Panhandle Refg. Co.'s B. M. Orton 2, S. P. Ry sur, no lcn. Russell & Hardy's S. M. J. Benson 2, TE&L No. 1397 sur, 300 ft N No. 1. Gulf Prod. Co.'s P. Siegel 3, Amer Trib sur, sec 22, 375 ft S No. 2. Kentucky Oil Corp.'s W. F. Parrish A-1, H&TC Ry sur, sec 26, 150 ft to N and W lines; B-1, 150 ft to N and E lines. Woodburn Oil Corp's L. F. Wilson A-9, Amer Trib sur, sec 27, 150 ft to N and E lines; A-8, 200 ft to E and 150 ft to S line. Griswold Oil Corp's L. F. Wilson 5, Amer Trib sur, sec 31, 150 ft to N and W lines; 6, 200 ft to E and 150 ft to S line.

Atascosa County—H. L. Hamilton's R. T. Hughes 11, J. Sharp sur, No. 518, 565 ft S No. 7.

Bowie County—McCullough & Roell, Ltd.'s W. R. Williams 1, P. M. Rice sur, 450 ft to N and 160 ft to W line.

Brown County—Cab. Bros. Oil Synd.'s Prater & Stone 2, N. B. Travis sur, 240 ft to W and 200 ft to S line.

Bexar County—Economy Oil Co.'s Kaufman 1, 200 ft to W line; 2, 400 ft N No. 1; 3, 400 ft E No. 1; 4, 400 ft E No. 2; 5, 400 ft N No. 2. Helvetia Oil Co.'s S. Smith 20, 294½-266-272, 550 ft S No. 19; 21, 485 ft W No. 318. Hitchman & Howard's H. Schmidt 9, F. Rolen No. 48 sur, 150 ft to N and W lines. Gas Ridge Dev. Co.'s Hamilton Land & Dev. Co. 9, Nos. 4 and 86 sur, 2245 ft to N and 585 ft to W line.

Brazoria County—Sinclair Oil & Gas Co.'s H. B. Perry 1, S. F. Austin ½ sur, 121 ft to W and 150 ft to S line. Humble Oil & Refg. Co.'s M. Schmidt A-1, S. F. Austin 7½ sur, 200 ft to N and 100 ft to W line.

Callahan County—Godley Oil & Gas Co.'s J. H. Ogle 16, TE&L No. 2297 sur, 300 ft W No. 15. W. B. Richardson's T. E. Hayden 1, Univ Lands sur, sec 115, 200 ft to N and 165 ft to E line. Lay & Dickey Oil Co.'s W. E. Pruitt 4, TE&L No. 2278 sur, 150 ft to N and 450 ft to W line; 5, 250 ft W No. 3. Sprowls, Harwell & Cook's H. Wagley 3, D&D Asy sur, sec 2, 300 ft S No. 1. Bachelors Oil Co.'s W. M. Isenhour 2, TE&L No. 2299 sur, 600 ft to E and 150 ft to S line. D. A. Mosner's J. L. Woods 2, TE&L No. 2276 sur, 150 ft to S and W lines. E. L. Bradley's O. Wagley 1, TE&L No. 2996 sur, 50 ft to N and 750 ft to E line Big Five Oil Co.'s Pruet 3, TE&L No. 2278 sur, 150 ft to S and W lines. Rod McDonald's H. D. Taylor 1, Insane Asy sur, sec 62, 300 ft to S and W lines. Moody & Jordan's R. B. Weddington 1. S. P. Ry sur, No. 455, 450 ft to W and 1800 ft to N line. Roaring Springs Oil & Gas Co.'s J. M. Isenhous 1, TE&L No. 2293 sur, 150 ft to S and E lines.

Carson County—Danciger Oil & Refg. Co.'s Burnett Est. 1, I&GN Ry sur, sec 129, 350 ft to S and W lines. Devore, Latimer & Greenwood's Burkburnett 1, I&GN Ry sur, blk 4, 300 ft to N and W lines. J. E. Crosbie's S. B. Burnett 1, I&GN Ry sur, blk 5, 350 ft to S and W lines.

Caldwell County—Rio Bravo Oil Co.'s J. M. Merriweather 1-9, Jno. Henry sur, 300 ft N No. 5.

Chambers County—Kirby Petroleum Co.'s A. G. McKinney 1. W. Hodges sur, 105 ft to W and 723 ft to N line.

Eastland County—Republic Prod. Co.'s W. M. Sneed 2, McClellan C. S. L. sur, SE Cor. W. S. Dougherty et al's Hatten 1, H&TC Ry sur, sec 30, 640 ft to N and 1350 ft to W line. W. R. Bowden's W. J. Jones 1, D. S. Richardson sur, sec 38, 150 ft to N and E lines. Kirk Brewer's G. T. Sloane 1, D&D Asy sur, 150 ft to W and 510 ft to N line; T. M. Shugart 4, McLennan C. S. L. sur, blk 34, 150 ft to E and 680 ft to S line. J. H. Haynes' W. A. Howard 1, McLennan C. S. L. sur, sec 12, 200 ft to N and 350 ft to W line. Humble Oil & Rfg. Co.'s W. M. Sneed 3, McLennan C. S. L. sur, blk 22, 150 ft to N and W lines. El Dorado Oil & Gas Co.'s Hague 1, T&P Ry sur, sec 5, 450 ft to N and E lines. Panhandle Refg. Co.'s L. A. Hightower 20, Wm. Van Norman sur 155 ft to E and 150 ft to S line; E. H. Webb 6, 150 ft to N and 455 ft to E line; 7, 150 ft to N and 155 ft to E line.

Fort Bend County—Rycade Oil Corp's B. Wisdom 1, H. N. Cleveland sur, 600 ft to N and 300 ft to E line. Gulf Prod. Co.'s T. W. Davis 14, M. Young sur, NW No. 12.

Galveston County—Gulf Prod. Co.'s G. E. Smith 1, M. Dunman 15⅓ sur, NW Cor.

Grimes County—L. F. McCausland's G. W. Dodd 1, T. Jones sur, SE Cor.

Guadalupe County—Allen Burman's Battles 1, Jno. Tom sur, North part.

Gonzales County—Hindman & Mitchell's Kenetka & Morgan 1, Jas Elder sur, NE Cor.

Harris County—S. A. Weed's Conway 1, Jas. Strange sur. blk 13-14, SE Cor. blk 13. W. E. Defee's Mason 2, R. Dunman sur, 300 ft to W line. Galena Signal Oil Co.'s J. B. Stevenson 41, J. B. Stevenson sur, blk 3, 250 ft W No. 13; 42, 150 ft to S and 400 ft to W line. Gulf Coast Oil Corp. & Crown Oil & Refg. Co.'s Gulf 37, Wm. Scott sur, E of No. 11. J. M. Hester's Herman 67, J. B. Jones sur, 140 ft NW of No. 66. Marsalis Bros.' J. W. Finches 1, Jas. Strange sur, blk 2, 30 ft to N and W lines H. A. Clines's Bailey & Norton's 1, Jones-Butler sur, blk 1, Center. C. A. Gunter's Texas Co. 3, Echols sur, no lcn.

Hardin County—Chas. Paggi & Co.'s Queen City-Texas 1, S. F. S. Jorditt sur, 200 ft to N and 100 ft to W line. East Batson Oil Co.'s C. Conzleman 3, F. H. Green sur, 93 ft to W and 49 ft to S line; J. Conzleman 6, North part. Humble Oil & Refg. Co.'s Hardin Co. 38, S. Jackson sur, 450 ft to N and 250 ft to E line. Rio Bravo Oil Co.'s Fee B-10, BBB & C sur, blk 394, 50 ft to W and 1050 ft to S line; B-12, 100 ft to W and 700 ft to S line. Ada Belle Oil Co.'s W. Davis 76, Jno. Knight sur. 50 ft to S and 54 ft to W line. Weldon Oil Co.'s W. E. Brice 5, M. E. Hopkins No. 1 sur, SE Cor.

Jefferson County—Unity Oil Co.'s McFaddin, Weiss & Kyle's 84, P. Humphries sur, 450 ft to N and 6300 ft to E line. Gulf Prod. Co.'s Gladys 151, A. Veatch sur, blk 42, no lcn. Stella Oil Co.'s Hogg-Swayne 17, Spindletop sur, blk 37, 300 ft E No. 6; J. E. Schingler 1, blk 36, SW Cor.

Knox County—Williams & Rhodes' F. Lawson 1, H&TC Ry No. 81, sur, 360 ft to E and 660 ft to N line.

Loving County—Ira J. Bell's H. Lepys 1, W&NW Ry sur, blk 2, 500 ft to N and E lines.

Liberty County—Gulf Prod. Co.'s Phoenix Dev. Co. 36, J. Devore sur, S of No. 35.

Milam County—Fogle Oil Co.'s B. McClellan 10, Burchard sur, 300 ft S No. 9. National Refg. Co.'s L. S. Dilworth 2, J. J. Acosta sur, 778 ft to E and 416 ft to S line. Erie Investment Co., Ltd., B. McClellan 7, A. F. Burchard sur, 800 ft to E and 850 ft to S line.

McMullen County—Southern Nat'l Gas Co.'s H. L. Lark 9, E. W. B. Scrugham sur, 1200 ft N No. 8.

Navarro County—Pyle William & Co.'s G. C. Boyd 2, J. D. Mathews sur, 150 ft to N and E lines. Boyd Oil Co.'s J. R. Webb 6, Choates & White sur, 150 ft to N and 840 ft to E line.

Orange County—Mutual Oil Co.'s O. Chesson 13, Wm. Dyson sur, 175 ft N No. 6. Gulf Prod. Co.'s Wm. Winfree 5, Wm. Dyson sur, NE Cor.

Shackelford County—C. Houseman's R. A. Elliott 1, Univ. Lands sur, sec 82, 750 ft to S and W lines. Graham & Lash's J. W. Littlefield 1, Insane Asy sur, sec 5, 150 ft to S and W lines. Lion Tamers Oil Corp.'s B. H. Ezell 1, Insane Asy sur, sec 3, 150 ft to N and W lines. J. L. Groce's J. H. Elliott 1, Insane Asy sur, sec 8, 200 ft to S and W lines. H-Y Oil Co., Inc., W. C. Owens 21, Insane Asy sur, sec 20, 150 ft to W and 300 ft to N line. L. B. Tannerhill's R. J. Moberly 7, T&P Ry sur, sec 11, 600 ft E No. 6. W. F. Belcher's L. M. Watson 6, Univ Lands sur, blk 36, 1050 ft to W and 1700 ft to N line.

Shelby County—Coleman, Mayfield & Smith's G. T. Branch 1, E. Stony sur, 150 ft to S and 415 ft to E line.

Stephens County—Swensondale Oil Co.'s A. Echols 1, T&P Ry sur, sec 6, 300 ft to S and E lines. Arthur Hunt's E. A. Stribling 1, 600 ft to E line.

San Saba County—Cowart, Abraham & Virdell's J. E. Cowart 1, F. Helleman sur, sec 625, 200 ft to E and near north line.

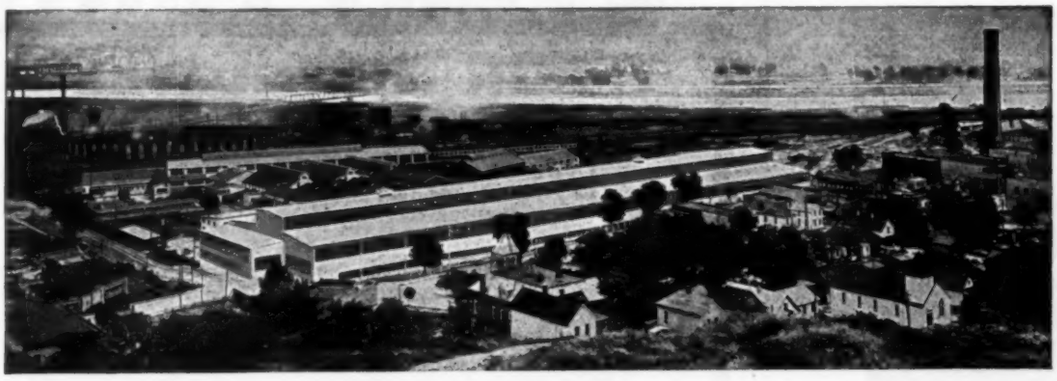
Throckmorton County—Humble Oil & Ref. Co.'s J. L. Stubblefield 1, TE&L sur, No. 991, 330 ft to S and W lines.

Titus County—Humble Oil & Ref. Co.'s Brown A-2, Tomlinson sur, 2550 ft to W and 1075 ft to S line. Magnolia Pet. Co.'s Geo. Antone 1, M. V. Delgardo sur, 605 ft S of N line, then 836 ft to E line.

Wichita County—Grayce Oil Co.'s S. M. Daniel 10, H. Hastie sur, 150 ft to S and 800 ft to E line. J. V. Henley's Foster & Allen 7, SA&MG Ry No. 1 sur, 750 ft to E and 150 ft to S line; 8, 450 ft to E and 150 ft to S line; 9, 150 ft to S and E lines. Grisham, Parks & Noble's R. E. Huff 1, Denton C. S. L. sur, blk 20, 660 ft to N and W lines. F. B. Jackson Jr.'s J. W. Blagg 1, Cowherd Bros. sur, blk 28, 200 ft to N and 150 ft E line. Associated Oil Co.'s Garcia. Maer Staniforth's S. B. Burnett 1, T&NO Ry sur, sec 2, 150 ft to N and E lines. Cline Oil Co.'s Kemp & Allen 1, W. V. F. L. sur, blk 27, 510 ft to N and 495 ft to E line. Dr. Chas. Wm. Wallace's Fassett & Tuttle 37, DL&C Co. sur, 100 ft to N and 150 ft to W line. Kentucky Oil Corp.'s T. Burnett 2, HT&B Ry sur, sec 2, 150 ft to N and E lines. Apple-Brandeberry Oil Co.'s C. Jennings A-9, HT&B Ry sur, sec 2, 150 ft to N and E lines. Texhoma Oil & Ref. Co.'s S. B. Burnett B-5, SA&MG Ry sur, sec 5300 ft E No. 4; Perkins 1, T&NO Ry sur, sec 2, 150 ft to N and E lines. R. T. Couch's J. W. Donohoo 7, Robertson sur, 325 ft S No. 2. Swain & Holcomb's J. W. Ferguson 1, J. W. Robertson sur, 150 ft to N and W lines. Evangeline Pet. Co.'s S. B. Burnett 10, H&GN Ry sur, sec 9, south of No. 6 and west of No. 9. W. L. Mann's Roller 7, J. Mumpford sur, 170 ft to N and 400 ft to W line. Culbertson Co.'s J. Waggoner 26, BS&F Ry sur, sec 13, 1300 ft to N and 2970 ft to W line. J. H. Howell's T. L. Burnett 1, HT&B Ry sur, sec 9, 550 ft to W and 150 ft to N line.

Wilbarger County—Kemp Randel Wilson's Teiset 1, H&TC Ry sur, sec 19, 165 ft to N and 1200 ft to E line. J. F. Knox's W. H.

"WRITE FOR OUR CATALOG"



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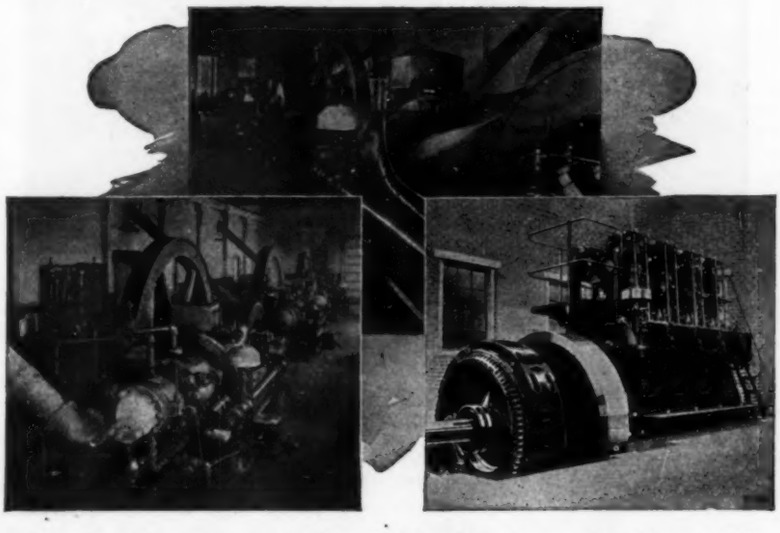

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Say you saw it in The Oil Weekly

WILDCATS FROM ALL SECTIONS

Good Showing of Oil Reported in Northwest Gray County Increases Operators' Interest in Panhandle

Amarillo, Texas, June 30.—Lease protection in the northwest part of Gray County has been sought during the past week by most of the major operators in the Mid-Continent district as result of the favorable showing made by the H. F. Wilcox Oil and Gas Company's wildcat test on the P. A. Worley et al ranch, and acreage is reported to have changed hands at prices ranging from $30 to $50 per acre. The well is located in section 62, I & G. N. Ry. survey, block 3, and was reported last week with several hundred feet of high gravity oil in the hole from sandy-lime pay at 2835-41 feet. It has since been deepened, and the bottom of the oil and gas pay was logged at 2851 feet. Late last week the well was reported with about 500 feet of oil in the hole while drilling in brown shale below 2855 feet. This oil tests 42.8 gravity at a temperature of 74 degrees, and will afford a small pumper from the present producing horizon.

The quality of the oil produced by this wildcat test is the best uncovered to date in the Panhandle district, and the fact that some gas accompanied the oil serves to add to the interest aroused by the wildcat strike. A number of miles further east in Gray County, a wildcat being drilled by W. H. Holmes and others on the J. S. Morse ranch, section 17, block A-9, has suspended operations at 3100 feet after showing signs of granite formation with a hole full of water. This test reported a small show of oil in a broken formation from 2795 to 2820 feet, and is believed to be the same producing horizon as was uncovered by the Wilcox test.

The Reece S. Allen refinery at Amarillo is being overhauled to start operating on crude produced in the Panhandle district, as result of the completion of the Plains Pipe Line Company's small line from the Carson-Hutchinson County oil field to the town of Panhandle on the Santa Fe railroad. The crude will be moved in tank cars from Panhandle to Amarillo. The Texas Company, which is the largest oil producer in the Panhandle district, has agreed to swap crude with Reece S. Allen, thereby affording an ample supply for the operation of the Amarillo plant, which has a capacity of 1500 barrels daily, while it is reported that Gulf Production Company is also entertaining a proposition to exchange its Panhandle crude with the Allen interests. It is reported that The Texas Company has agreed to swap on a basis of four barrels of Panhandle crude for three barrels of Wichita County crude, which is now owned or controlled by Reece S. Allen. The Texas Company has filled its 55,000 barrel tank and other small tanks with crude from its three oil wells in the Panhandle district, and has been forced to hold down its production until deliveries can get underway through the Plains Pipe Line Company line.

In Hutchinson County, R. G. Barnum and others' wildcat test on the Johnson Brothers ranch, section 37, block "Y", is rebuilding derrick after extinguishing fire caused by lightning on June 19 while making about 27,000,000 cubic feet of gas at 2825 feet. A small show of oil logged at 2110 feet in the wildcat test being drilled in Wheeler County by Roy Schenck and French on the C. C. George land, section 85, block 17, failed to amount to anything when casing was set at 2108 feet and the pay given a test, and drilling is now underway below 2125 feet.

Carson County is to be given another test on the S. B. Burnett ranch by the Olsen brothers of Tulsa. They are to drill a test in the southeast quarter of section 107, block 5, on a lease held by E. S. Blasdel-P. H. Landergrin and others, and the latter are to retain an over-riding royalty interest. Blasdell-Landergrin et al obtained the first lease ever granted on the Burnett ranch in July, 1919 and their original lease amounted to 20 sections, or 12,800 acres.

A combination rig has been erected for a wildcat test to be drilled by A. Trammell and others on the I. H. Spikes ranch, King County, and drilling equipment has been shipped to start operations early in July. The Pyle-Williams Drilling Company has contracted to make the test, which is located in section 134, abstract 376, and about one-quarter of a mile south and east of Wichita River. Leases are held on both the Spikes and F. M. Patton ranches and amount to approximately 76,000 acres.

Reagan Well Flowing With Good Gas Pressure Further Proof of Potentialities of New Texas Area

Fort Worth, Texas, June 30.—Removal of the tools from the Big Lake Oil Company's first big oil producer in Reagan County section of West Texas last Tuesday resulted in the flow increasing to 59 barrels per hour, and late reports from the field indicate that the well is maintaining this rate of production with sufficient gas accompanying the oil to afford a steady flow. Since only a small amount of tankage is held in the field, the oil is being moved out in tank cars to refineries at El Paso and Fort Worth, while in the meantime the single loading rack serving the field is to be enlarged, and officials of the Big Lake Oil Company are contemplating the erection of a tank farm to consist of 55,000 barrel tanks.

This well was completed on June 20 from sandy-lime pay at 2977 to 2982 feet, as was reported in detail last week, and its performance is accepted as proof that West Texas has great potentialities from an oil producing standpoint. Until the completion of this big well, which is an east extension to the productive limits of the Big Lake field, only small pumpers were rewarded the pioneer operators in the field in the drilling of eight tests previously, and it was generally conceded that the area was similar to the Mitchell County field, located to the northeast. However, this viewpoint has been reversed since June 20, and a noticeable increase in wildcat activity is to be expected along the fold extending to the north and south of Reagan County, and leasing activity has already gained momentum in a general trend from the Big Lake field to the Mitchell County oil producing area. The major companies are setting the pace in the leasing activity, and checkerboarding the area before prices become inflated.

The Big Lake Oil Company's University 10, located due north of its big well, has been drilled to the top of the producing horizon with rotary equipment and standardized to complete, but will not be drilled in until more adequate facilities are available to handle the crude. The same company's University 11, located about one and one-half miles northeast of the big producer, is drilling below 2000 feet, and should be ready for completion before the middle of July.

Since the Texon Oil and Land Company of Big Lake and El Paso owns or controls all the acreage surrounding the producing area in Reagan County, a big development program is not to be looked for now that the field is proven for flush production. However, the Texon Company is drilling two tests to the east and northeast of the producing area, and is open for negotiations with responsible parties for leases, especially major companies having pipe line systems, as it is hoped to attract a pipe line to the field from Central West Texas fields.

Stephens 1, H&TC Ry sur, sec 83, 150 ft to W and 660 ft to N line. R. H. Hart's I. M. Smith 1, H&TC Ry sur, sec 23, 150 ft to S and W lines.

Webb County—Richmond Garcia Oil Co.'s E. Garcia 6, No. 605 sur, blk 8, 200 ft to N and 150 ft to E line. Associated Oil Co.'s Webster 1, BS&F sur, sec 684, 150 ft to N and W lines; Garcia 11, sec 607, blk 2, 450 ft to N and E lines. Alonzo Jr. Oil Producers' E. Garcia 5, 605 sur, 405 ft N No. 3. Magnolia Pet. Co.'s Ochoa 11, Ochoa sur, 300 ft to S and E lines.

Well Performance Quickens Interest in North Texas

Wichita Falls, Texas, June 30.—Montague County section of the North Texas district is promised a general revival in wildcat operations as result of the Boyd Oil Company's Mrs. M. H. Salmon 1 continuing to produce at the rate of 65 barrels of 26 gravity oil daily from a sand at 899 to 902 feet, and the Texhoma Oil and Refining Company is the first concern to get started in this new drilling campaign. The crude produced by the Salmon well is strictly a lube oil, and is as thick as molasses. The well has been bailed over a long period, and retains its initial production. The Texhoma Company's location is on the E. J. Bouldin farm, E. Votaus survey, or about two miles northeast of the discovery well, and drilling will probably be underway before the close of the present week. Several other tests are to be started in the upper part of the county during July, and virtually all available acreage has been taken, while the remaining uncovered leases are being held for almost unreasonable prices for wildcat protection.

A second wildcat test started early in June by the Boyd Oil Company in the northwest part of Montague County and near the south bank of the Red River is showing for about 20,000,000 cubic feet of gas with a light spray of oil from broken sand from 521 to 588 feet. This gasser is on the Mrs. F. E. Loy land, Wm. Donoho survey, and extends the shallow gas field to the west. The production has a rock pressure of 310 pounds, and has been shut in temporarily, but it is expected that an effort will be made to shut off the gas flow and drill deeper in search of oil.

The South Vernon oil and gas pool in the center of Wilbarger County added another producer last week when Wells and Guiberson's Wharton 1 tested 1,500,000 cubic feet of gas and about 25 barrels of oil from broken sand at 1305 to 1315 feet. In Wise County, Wynne Brothers' wildcat test on the Castleberry land is preparing to make a test of a good show of oil in sand pay at 1358 to 1365 feet.

Central West Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Brown County—		
Brownwood Prod. & Ref. Co. Williams 9	25	2485
Canyon Oil & Gas Co. J. W. Newton 2	*	1355
Patterson Oil Co. J. W. Newton 1	¶2	1490
Coleman County—		
Roth & Farouth M. T. Overall 8	*	1550
Mitchell County—		
The California Co. W. H. Abrams 1-DD (discovery well)	70	3050
Palo Pinto County—		
Pat Dalton et al Dalton 1	30	1375
Reagan County—		
Big Lake Oil Co. University 9	1400	2982

DRILLING REPORT

BROWN COUNTY—M. T. Anderson et al's Wheeler 1, dr 970 ft. Chas S. Avery et al's Cox 3, rig. Carlton-Tippett's O. B. Fomby 1, setting cas 1800 ft. Gump et al's Moore 1, rig. Gilliam et al's J. W. Newton 1, rig. Honea et al's E. DeBusk 2, dr 1710 ft. Leonard et al's Prather 2, sd 2370 ft. Maher Bros.' Bohara 1, sd 2260 ft. Mahlstedt Mook Oil Co.'s Gaines 1, lcn. Mendenhall et al's Newton 1, testing oil sand 1245-55 ft. McMurray et al's Newton 2, machine. Omaha Southern Oil Co.'s G. B. Gaines 2, sd 1690 ft.

CALLAHAN COUNTY—Tom Bryant et al's Forbes 1, dr 490 ft. Byron-Union Oil Co.'s Hennessey 1, sd 4045 ft. Chas Dutton et al's Carter 1, spudding; Harwell 1, sd 480 ft; Cathey 4, sd 695 ft; Cathey 5, timbers; Cathey 6, rig; Cathey 7, timbers. Dudley Oil & Gas Co.'s Hugh Moore 1, sd 1835 ft. Hickey et al's E. L. Findley 2, skidding rig, td 2710 ft. Junior Oil Co.'s Huntington 1, dr 500 ft. Kellog Drilling Co's Snyder 1, dr 810 ft. McBride et al's Isenhower 1, sd 435 ft. McCree et al's Isenhower 1, dr after shot 1765 ft. McMath et al's Isenhower 1, spd and sd. E. W. Montray et al's Isenhower 1, lcn. Root & Rhodes et al's Kile 1, dr 2750 ft. Seaboard Oil & Gas Co.'s Isenhower 4-B, sd for cas 1640 ft. Shackelford et al's Chas. Allen 1, sd 1675 ft. John Serrien et al's Cathey 3, dr 1100 ft; Cathey 4, spudding. Texas Pacific Coal & Oil Co.'s N. J. Biggerstaff 1, spudding. Tidal Oil Co.'s Mrs. E. Cathey 3, dr 1530 ft; Cathey 4, dr 600 ft.

COLEMAN COUNTY—W. A. Gray et al's Gray 5, sd 2480 ft. T. B. Slick et al's Y. Johnson 1, dr 1690 ft.

PALO PINTO COUNTY—Cogwell et al's Wall 1, sd 905 ft. Cunningham et al's Holly 1, sd 705 ft. McKinney et al's Marsden 1, sd 465 ft. Moore & Sneboldt's Boles 2, sd after shot 3420 ft. S. W. Manning et al's R. Hitson 1, sd 3640 ft. Phillips & Graham's J. A. Caudill 1, co with good show oil after shot 60 quarts from 3555 to 3585 ft. Strawn Coal Co.'s Fee 1, dr 1010 ft. Scott & McCluer's River Bed 1, sd 3715 ft. H. L. Singleton et al's W. Holt 1, sd 4360 ft. B. H. Talbert et al's J. J. Thornton 1, sd 725 ft. Texas Pacific Coal & Oil Co.'s J. N. Stewart 146, lcn. Youkan Oil & Gas Co.'s Seaman 1, sd 3965 ft.

BORDEN COUNTY—Reeves-Parkhurst et al's A. J. Long 1, sd 155 ft.

BREWSTER COUNTY—Arco Development Co.'s H. L. Kokernot 1, sd 3775 ft. Brewster Oil Corp.'s W. H. Kokernot 1, sd 2515 ft. Portland Oil Synd.'s State 1, sd 3050 ft. Marathon Oil Co.'s Nigger Creek-Cage 1, sd 2685 ft. Nine Points Oil Co.'s Paralto et al 1, sd 1570 ft.

COKE COUNTY—Ace Oil Co.'s W. C. Locke 1, spd and sd. Mexia-Equitable Oil Co.'s W. J. Hodges 1, sd 2505 ft.

CONCHO COUNTY—Dome Production Co.'s Mrs. C. M. Hartgrove 1, dr 1181 ft. Signal Oil Co.'s Sam Waring 1, sd 3203 ft. Schultz Oil Co.'s W. O. Schultz 1, sd 3225 ft.

CRANE COUNTY—Texas Development Co.'s Jack Cowden 1, sd 265 ft.

CROCKETT COUNTY—Levi Smith et al's University 1, sd 3210 ft. Crockett Drilling Synd.'s J. M. Shannon 1, plugging back from 4270 to 2500 ft; Shannon 2, lcn; Robt. Massey 1, dr 750 ft. Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s Harris Bros. 1, dr 2290 ft. Marathon Fold Drilling Club's L. P. Powell 1, fsh 845 ft. W. E. Ball et al's J. S. Todd 1, lcn.

CULBERTSON COUNTY—David Flood et al's McAlpine et al 1, lcn. J. D. Wesner et al's Mack Sayles 1, sd 3105 ft.

DAWSON COUNTY—Lamesa Oil Co.'s John Burns 1, sd 2155 ft.

ECTOR COUNTY—Farmers Oil & Gas Co.'s Andy Newham 2, sd 1400 ft.

EL PASO COUNTY—Burns & Knight's Fee 1, sd 4170 ft.

FISHER COUNTY—Pyron Oil Co.'s J. S. McCall 1, sd 3125 ft.

GARZA COUNTY—B. V. Blackwell et al's J. M. Boren 1, dr 1335 ft. Union Pet. Corp.'s Clyde C. Connell 1, rig.

GLASSCOCK COUNTY—Ledger Oil Corp. (was Associated Ref. & Prod. Co.) C. I. Brunson 1, setting cas 3100 ft. General Oil Co.'s L. S. McDowell 4, dry and abn 3685 ft. Cushing Ranch Drilling Assn.'s W. H. Sparkman 1, sd 1950 ft.

HUDSPETH COUNTY—Wm. Loftus et al's Minnie Veal Slaughter 1, sd 1820 ft. Boole Oil Assn.'s Gardner et al 1, sd 1450 ft. Hueco Basin Oil Co.'s University 1, sd 2560 ft.

HOWARD COUNTY—Big Springs Oil Co.'s Mable O. Quinn 1, sd 3640 ft.

JONES COUNTY—Anson Oil & Dev. Co.'s C. B. Brown 1, sd 1855 ft. C-H Oil Dev. Co.'s J. A. Cullom 1, sd 3300 ft.

LOVING COUNTY—J. J. Wheat et al's N. E. Chapman 1, sd 50 ft. Ramsey Prod. Co.'s Russell 1, sd 4485 ft; Russell 2, sd 810 ft.

MITCHELL COUNTY—The California Co.'s W. H. Abrams 6, rigging up; E. Morrison 1-A, dr 5170 ft; Morrison (Lse. 5) 8, dr 2100 ft; Morrison 9, dr 1500 ft; Morrison 10, dr 330 ft; Morrison 11, dr 1400 ft; A. L. Miller 3, dr 2700 ft; Miller 4, fsh cas 2475 ft. S. A. Sloan Oil Co.'s Sam Smart 5, dr by tools, td 3045 ft. Chal Daniel et al's W. D. Kynard 1, rig.

GOTT

Water Can

Galvanized.
No heat conductors.
Sizes—1½, 3, 5, 10 gallons
Special water cans and coolers made upon order.

For Sale at All Supply Stores

H. P. GOTT MANUFACTURING COMPANY
WINFIELD, KANSAS

To Prevent Occurrences Such As This

which wrecked their Cartwright No. 1 the Houston Oil Company used a

The C.I.W. BLOWOUT PREVENTER

On their Cartwright No. 3, at Lucas, Live Oak County, where a gas pressure of 1100 pounds was encountered at 2298 feet. Their report of "Everything satisfactory" tells the rest of the story.

Distinctive Features

—A steel body with sufficient thickness to withstand any pressure encountered.
—Rams are interchangeable for the different sizes drill stem or casing used.
—Contains no gaskets, flanges, lead, babbitt or bolts to break or give way under pressure.

Made in Sizes to Fit on to 6, 6⅝, 8 and 10-Inch Casing

—Simplicity of Design.
—Allows Casing to be set through it.
—Exceptionally large opening.

Guaranteed to Hold 2000 lbs. Cold Water Pressure

Write for Specifications and Prices

CAMERON IRON WORKS
HOUSTON, TEXAS

Well Performance Quickens Interest in North Texas

Wichita Falls, Texas, June 30.—Montague County section of the North Texas district is promised a general revival in wildcat operations as result of the Boyd Oil Company's Mrs. M. H. Salmon 1 continuing to produce at the rate of 65 barrels of 26 gravity oil daily from a sand at 899 to 902 feet, and the Texhoma Oil and Refining Company is the first concern to get started in this new drilling campaign. The crude produced by the Salmon well is strictly a lube oil, and is as thick as molasses. The well has been bailed over a long period, and retains its initial production. The Texhoma Company's location is on the E. J. Bouldin farm, E. Votaus survey, or about two miles northeast of the discovery well, and drilling will probably be underway before the close of the present week. Several other tests are to be started in the upper part of the county during July, and virtually all available acreage has been taken, while the remaining uncovered leases are being held for almost unreasonable prices for wildcat protection.

A second wildcat test started early in June by the Boyd Oil Company in the northwest part of Montague County and near the south bank of the Red River is showing for about 20,000,000 cubic feet of gas with a light spray of oil from broken sand from 521 to 588 feet. This gasser is on the Mrs. F. E. Loy land, Wm. Donoho survey, and extends the shallow gas field to the west. The production has a rock pressure of 310 pounds, and has been shut in temporarily, but it is expected that an effort will be made to shut off the gas flow and drill deeper in search of oil.

The South Vernon oil and gas pool in the center of Wilbarger County added another producer last week when Wells and Guiberson's Wharton 1 tested 1,500,000 cubic feet of gas and about 25 barrels of oil from broken sand at 1305 to 1315 feet. In Wise County, Wynne Brothers' wildcat test on the Castleberry land is preparing to make a test of a good show of oil in sand pay at 1358 to 1365 feet.

Central West Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Bbls.	Depth
Brown County—		
Brownwood Prod. & Ref. Co. Williams 9	25	2485
Canyon Oil & Gas Co. J. W. Newton 2	*	1355
Patterson Oil Co. J. W. Newton 1	¶2	1490
Coleman County—		
Roth & Farouth M. T. Overall 8	*	1550
Mitchell County—		
The California Co. W. H. Abrams 1-DD (discovery well)	70	3050
Palo Pinto County—		
Pat Dalton et al Dalton 1	30	1375
Reagan County—		
Big Lake Oil Co. University 9	1400	2982

DRILLING REPORT

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LOVING COUNTY—J. J. Wheat et al's N. E. Chapman 1, sd 50 ft. Ramsey Prod. Co.'s Russell 1, sd 4485 ft; Russell 2, sd 810 ft.

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Galvanized.
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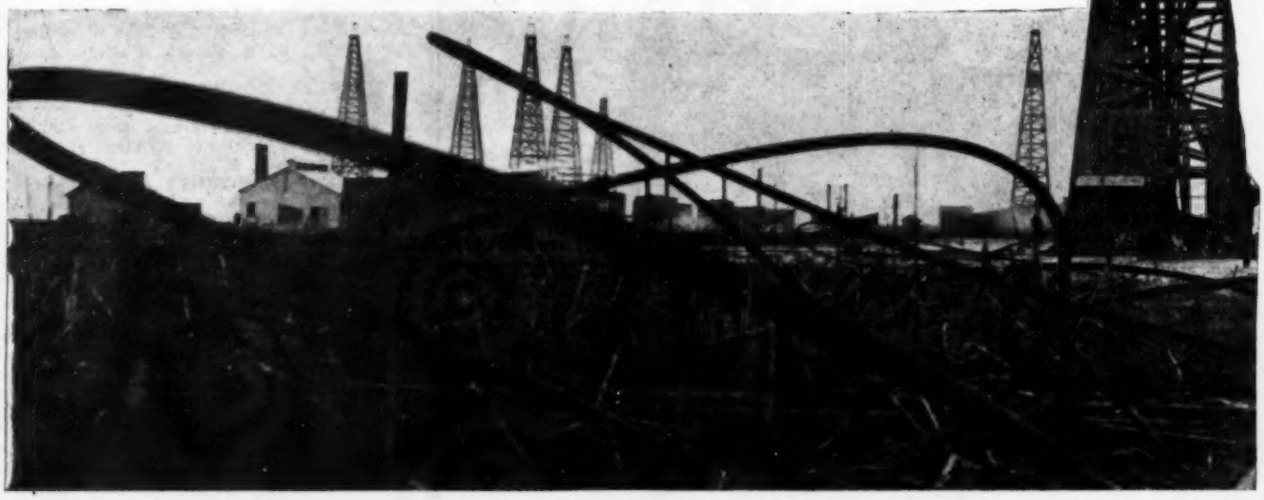
CAMERON IRON WORKS
HOUSTON, TEXAS



M. E. Eddlemen et al's A. C. Gist 1, spudding. Morrison-Rowe Lease Synd.'s W. D. Kynerd 1, rig. Tidal Oil Co.'s J. J. Handley 1, showing oil at 2450 ft, dr 2550 ft. J. T. Harris et al's W. C. Brown 1, dk.

PECOS COUNTY—W. K. Maulls et al's W. W. Batchler 1, lcn. C. E. Menzie et al's Sherbino Bros. 1, lcn. Trans-Pecos Oil Co.'s Johnson-Troy 1, sd 2965 ft; H. L. Thomas 1, sd 1610 ft; Bennett 1, sd 1245 ft; Turney 1, dr 2906 ft. Southern States Lease & Prod. Co.'s J. M. Odem 1, sd 1205 ft. Oregon-Texas Oil Co.'s Turney 1, sd 3520 ft. Quinby et al's Townsite 1, bldg rig.

PRESIDIO COUNTY — Claude Byler et al's Toole Estate 1, sd 865 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 10, sd for storage 2978 ft; University 11, dr 1950 ft. Mid-Kansas & Transcontinental's McIntosh Ranch 1, sd with hole full water 3433 ft. Wm. Dunning & Humble Oil & Ref. Co.'s Sawyer Ranch 1, dr 2285 ft. Texon Oil & Land Co.'s University 1, (Sec. 1, Blk. 8) fsh tools 2200 ft; University 1, (Sec. 22, Blk. 9) dr 685 ft. Orient Oil Co.'s J. Belcher 1, lcn.

REEVES COUNTY—Dixieland Oil Co.'s Oates 2, sd 4505 ft. W. S. Troy et al's H. G. Hersheusen 1, sd 415 ft. Bell Reeves Oil Co.'s Findley et al, sd 1540 ft. El Paso Saragosa Oil Co.'s Geo. Wirt 1, sd 540 ft. Parker-Hancock Oil Co.'s Johnson 1, sd 1930 ft. Willoughby Pet. Co.'s W. D. Cowan 1, sd 610 ft. Rodenbaugh & O'Connell's W. D. Casey 1, sd 845 ft. Pecos Pet. Co.'s Johnson 1, sd 1930 ft. Texas Drilling & Dev. Co.'s Pecos Valley 1, sd 1105 ft.

SCURRY COUNTY—Camp Springs Oil & Gas Co.'s L. E. Howell 1, lcn; W. R. Quinn 1, sd 3005 ft; W. V. Jones 1, sd 605 ft. Hermleigh Oil & Gas Co.'s J. W. Burris 1, sd 3005 ft. Stanton Oil & Gas Co.'s J. W. Riley 1, sd 3505 ft.

STERLING COUNTY—Chicago-Texas Oil & Gas Synd.'s D. C. Durham 1, sd 1427 ft; Durham 2, lcn. Co-Operative Lease & Dev. Co.'s Douthitt 1, sd 1775 ft. Fidelity Oil Co.'s Hull 1, sd for cas 1640 ft. Concho River Drilling Assn.'s Geo. McIntyre 1, sd 500 ft.

TAYLOR COUNTY — Sanger Oil & Ref. Co.'s McClure 1, lcn; Tom Sawyer 1, sd for cas. 2700 ft; Hollingshead 1, rig.

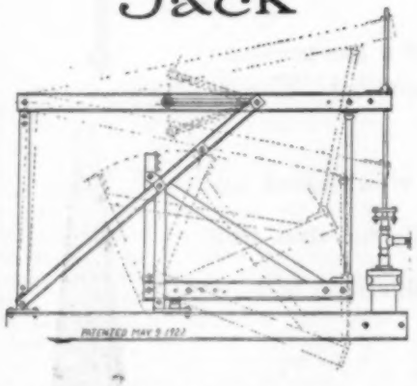
TERRELL COUNTY—Southwest Texas Oil & Gas Co.'s S. W. T. No. 1, sd 3515 ft. Pittsburg-Western Oil Co.'s Chas. Downey 1, sd 1260 ft.

TOM GREEN COUNTY — Ranger Investment & Dev. Co.'s Harris 1, sd 3365 ft.

VAL VERDE COUNTY—Independent Operators' W. F. & W. E. Whitehead 1, sd 2200 ft. East Del Rio Oil Co.'s E. F. Russell 1, sd 1800 ft. Hodge-Wright et al's Belle Moore Estate 1, sd 680 ft.

WARD COUNTY — Arthur Pitts Oil Co.'s Soda Lake 1, sd 2205 ft; River 1, sd 4675 ft. Cook & O'Brien's G. W. O'Brien 1, sd 1175 ft. Trans-Pecos Oil Co.'s Longnecker 1, sd 1765 ft.

The Jensen Straight Lift Jack



The Polished Rod *can't* Bend

The Jensen Jack lifts it *Straight up,* and lowers it *straight down*

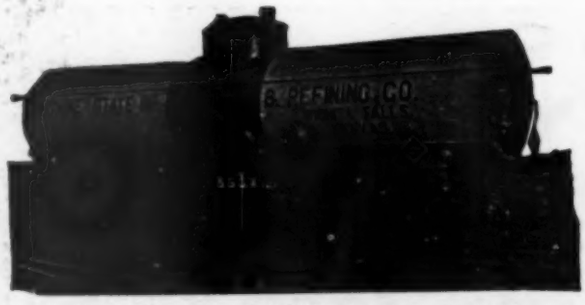
without any strain or excessive wear on the Rod, or on the Stuffing Box Rings, or on anything else.

The Straight Lift makes a five-foot stroke practical. Made in No. 2 and No. 3 sizes

Jensen Bros. Mfg. Co.
Nowata, Oklahoma

Petroleum and Its Products

High-Grade—Uniform Quality



Gasoline, Kerosene, Fuel Oil, Naphtha, Distillates

Sunshine State Oil & Refining Co.

(Incorporated)

Offices, 1019-1025 American National Bank Bldg. Wichita Falls, Texas

North Texas Wildcats

COMPLETIONS

Baylor County—
Magnolia Pet. Co.'s W. B. Mills 1 30 1432
Knox County—
White Oil Corp.'s Ward Ranch 1... * 2815
King County—
Banks Oil Co.'s J. R. Hailey 1.... * 1600

DRILLING REPORT

(Note—This report does not include tests that have been shut down indefinitely).

BAYLOR COUNTY—Batchelder & King's E. S. Wallace Estate 1, rigging up. B. Cranfill's W. B. Mills 2, dr 50 ft. Crittenden et al's J. B. Coffee 1, dr 1445 ft. Hapgood & Anderson's J. H. Turbeville 1, sd 1620 ft. Independent Oil Co.'s Robertson County School land 1, co 1040 ft. C. B. Jetter et al's F. Gatzki 1, sd 700 ft. D. H. Moore et al's H. H. Fancer 1, sd 50 ft. Staley & Ramming's T. W. Parker 1, sd 1800 ft.

CLAY COUNTY—J. T. Cumley's J. D. Stine 1, preparing to pump, td 1780 ft. Crude Oil Prod. Co.'s Kinder 1, sd 1060 ft. E. C. D'Yarmett's O. Bullington 1, pumping to test, td 1194 ft. L. R. Dixon et al's R. H. Godfrey 1, dr 1300 ft. Gulf Prod. Co.'s C. M. Worsham 4, sd 700 ft. Nebraska Oil & Gas Co.'s W. H. Myers 1, sd 3360 ft. Scaling Oil Corp.'s Geo. Scaling 1, ur casing 2050 ft. Texland Prod. Co.'s R. H. Joyce 1, rigging up.

COOKE COUNTY—Big Indian Oil Co.'s B. W. Davis 1, sd 3446 ft. Red River Drilling Co.'s Whaley Jones 1, fsh 1300 ft.

DENTON COUNTY—Big Indian Oil Co.'s K. Fortenberry 1, sd 200 ft. Hill Crest Oil & Dev. Co.'s J. H. Rayzor 1, sd 1350 ft.

FOARD COUNTY—Landreth Prod. Co.'s F. Hallsell 1, dr 2300 ft.

GARZA COUNTY—B. V. Blackwell's J. M. Boren 1, dr 1335 ft. United Pet. Co.'s Connell 1, dr 100 ft.

GRAYSON COUNTY—Zee Tex Oil & Dev. Co.'s G. W. Cannon 2, sd 3000 ft; Griffin 1, sd 2325 ft. W. R. Shankle et al's J. Marshall 1, dk.

HASKELL COUNTY—J. O. Galloway et al's F. S. Quade 1, sd 50 ft.

KNOX COUNTY—Brazos Bend Oil Co.'s J. E. Clark 1, sd 2000 ft. Williams et al's Ella Lawson 1, dr 450 ft.

MONTAGUE COUNTY—Bowie Chief Oil Co.'s C. H. Boedeker 1, sd 2725 ft. Boyd Oil Co.'s Mrs. M. H. Salmon 1, bailing at rate of 3 bbls per hour, td 902 ft. Gulf Prod. Co.'s M. E. Benton 1, lcn. Mascho Oil Co.'s J. L. Howard 1, sd 3510 ft. The Texas Co.'s I. A. Gist 2-A, dr 200 ft.

THROCKMORTON COUNTY—Ashcraft et al's Polk Co. School Land 1, sd 1440 ft. Graves & Burton's Reynolds Cattle Co. 1, sd 680 ft. Hale Tex Oil Co.'s Wm. Elliott 1, dr 633 ft. Houghland et al's Mrs. A. McKnight 1, dr 100 ft. Humble Oil & Ref. Co.'s Mrs. J. L. Stubblefield 1, rigging up. King et al's A. P. Broiles 1, sd 250 ft. Larkin et al's H. E. Conger 1, dr 880 ft. Maer & Staniforth's W. H. Portwood 1, dr 1425 ft. Shamrock Oil Co.'s Mrs. A. McKnight 1, rigging up. W. A. Whatley's E. T. Parrott 1, sd 475 ft; C. P.

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Yes! we have them— and hundreds of other quality lines for the oil field on which we are ready to give you real

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INTERNATIONAL SUPPLY CO.

Branch stores in 23 of the leading oil field towns in Oklahoma, Kansas, Wyoming, Colorado and Texas.

General Offices and Works
Tulsa, Okla.
District Offices: Denver, Colo.,
Fort Worth, Texas and El Dorado, Kans.

Say you saw it in The Oil Weekly

Todd 1, dr 600 ft. Young et al's Reynolds Cattle Co. 1, dr 311 ft.

WILBARGER COUNTY—Barker & Hamilton's A. P. Morris 1, dk. George Church's W. B. Dill 1, sd. td 1258 ft, est. 15,000,000 ft gas. Dumas & Ellis' W. H. Stephens 1, dr 110 ft. Herring et al's R. L. Castleberry 1, dr 340 ft. Noble Oil Co.'s W. T. Waggoner 1, dr 1630 ft. Pigg et al's W. H. Davis 1, dr 660 ft. South Vernon Oil Co.'s G. W. Richardson 1, fsh 1250 ft. Wells & Guiberson's A. B. Wharton 1, dr 1315 ft, oil and gas.

Texas Panhandle Wildcats

COMPLETION

Company, Well, Location—	Initial Production Bbls.	Depth
Hutchinson County——		
Plains Oil Co.'s J. F. Weatherly 1	¶15-50	3270

DRILLING REPORT

(Note—The drilling report below does not show wells that are shut down indefinitely).

CARSON COUNTY—American Ref. Co.'s S. B. Burnett 1, dr 2850 ft; S. B. Burnett 2, fsh bit, td 2400 ft. J. Crosby's S. B. Burnett 1, dk. Culbertson Bros.' V. B. Armstrong 1, sd 2100 ft. Danciger Oil Co.'s S. B. Burnett 1, dr 620 ft. J. Greenwood et al's S. B. Burnett 1, dr 725 ft. Gulf Prod. Co.'s S. B. Burnett 4, dr 350 ft. W. W. Silk et al's S. B. Burnett 3, fsh 2900 ft. Skelly Oil Co.'s Burnett 1, rigging up. The Texas Co.'s Mary C. Burnett 1, sd 2700 ft; Mary C. Burnett 2, fsh 2725 ft; S. B. Burnett 3, flowing approximately 250 bbls daily, td 3040 ft; S. B. Burnett 4, dr 1150 ft. W. T. Waggoner's McConnell 1, sd 3110 ft.

CHILDRESS COUNTY—Anderson et al's Givens 1, sd 3000 ft.

COTTLE COUNTY—T. J. Woodley's A. C. Dulaney 1, dr 1750 ft.

GRAY COUNTY—W. H. Holmes et al's J. S. Morse 1, sd 3100 ft. The Texas Co.'s G. H. Saunders 1, killing gas, td 2725 ft. Wilcox Oil Co.'s Combs & Worley 1, dr 2855 ft; J. H. Wilson 1, dr 265 ft.

HUTCHINSON COUNTY—R. E. Barnum's Johnson Bros. 1, sd 2800 ft. Gulf Prod. Co.'s E. Cockrell 1, dr 300 ft; J. A. Whittenberg 1, dr 560 ft. H. T. McGee et al's Smith Capers 1, co 3175 ft. Panhandle Ref. Co.'s J. J. Perkins 1, lcn. Prairie Oil & Gas Co.'s G. W. Deahl 1, dr 360 ft. Producers & Refiners Co.'s L. Bivens 1-B, sd 2650 ft, 75 million gasser. Tex-O-Oil Co.'s Johnson 1, dr 330 ft. Twin Six Oil Co.'s W. L. Kingland 1, dr 40 ft. Western Enterprise Oil Co.'s Smith Capers 1, rig burned, td 1100 ft. Wilson et al's Whittenberg 1, dr 2509 ft.

MOORE COUNTY—Producers & Refiners Co.'s Masterson 1, straightening hole, td 1950 ft.

POTTER COUNTY—Amarillo Oil Co.'s J. C. Warrick 1, dr 110 ft. Producers & Refiners Co.'s L. Bivens 1-A, dr by casing 3260 ft; Bivens 2-A, fsh 2580 ft.

ROBERTS COUNTY—Big Bend Oil Co.'s P. C. Ledrick 1, dr 100 ft.

WHEELER COUNTY—Cosden & Schenck's C. C. George 1, fsh 2075 ft. Mid-Continent Oil Synd.'s Ember 1, sd 440 ft. W. D. Shedden's B. F. Westmoreland 1, dr 260 ft. H. C. Tyrell et al's F. E. Sheldon 1, dr 2095 ft. Union Petroleum & Supply Co.'s O. T. Nicholson 1, dr 340 ft. J. Whittington's Williams & Laycock 1, sd 2060 ft. E. L. Woodley's D. S. Bowers 1, set casing 1355 ft.

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Keystone Pipe & Supply Company

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FORT WORTH, TEXAS

Branch Stores: Wichita Falls, Graham, Breckenridge

East Central Texas Wildcats

COMPLETIONS

Company, Well, Location	Initial Production Barrels	Depth
Henderson County—		
Richardson Bros. et al Cade Bros. 1, (Southerland sur.)	*	3501
Mutual Security Oil Co. Mrs. Browning 1, (Elijah Price sur.).....	*	3940
Hopkins County—		
Marland Oil Co. J. T. Goppedge 1, (N. Hamilton sur.)	*	4033
E. L. Smith Oil Co. B. F. Pippin 1, (Thomas R. Hankins sur.)	*	3605
Skelly Oil Co. et al J. M. McGowan 1, (S. Tunnage sur.)	*	3730
Dreeben-Laskey et al R. B. Patterson 1, (Henry Russell sur.)	*	3217
Navarro County—		
Gilbert Johnson et al L. Skiles 1, (D. R. Mitchell sur.).....	*	3285

DRILLING REPORT

ANDERSON COUNTY—Roeser Pet. Co.'s J. D. Via 1 (Issac Simpson sur) Austin chalk from 3440 to 3777 ft, running 5 3-16 cas to test gas at 4253 ft, td 4411 ft.

BOWIE COUNTY—Mission Oil Co.'s W. H. Nelson 1, (N. D. Headright sur) dr 460 ft. Delaney Oil & Gas Co.'s Rochelle 1, (Collin-McKinney sur) sd 2290 ft. Hooks Oil & Gas Co.'s Lewis Forte 1, (J. Parkman sur) temp. abn 2400 ft.

DELTA COUNTY—J. C. McNeil et al's M. C. Patrick 1, (D. Hodges sur) sd in Woodbine 2800 ft.

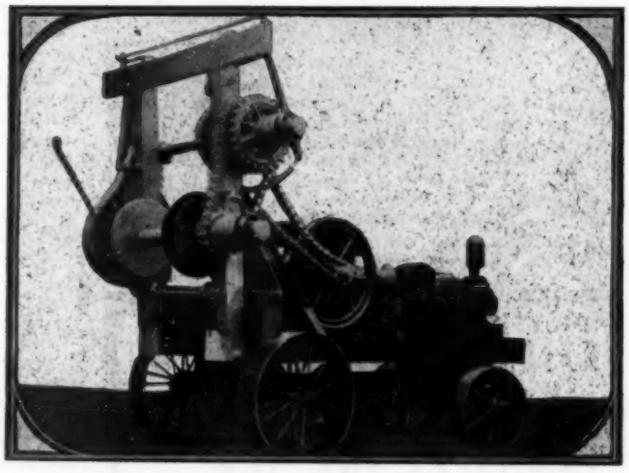
FREESTONE COUNTY—Hall & Hodges et al's F. E. Gaddy 1, (H. Howard sur) top Austin chalk 2607 ft, dr chalk 2780 ft.

FRANKLIN COUNTY — J. C. McNeil-Richardson Bros. et al's J. C. Harper 1, (J. S. Clift sur), top Austin chalk 1410 ft, dr 2000 ft.

HENDERSON COUNTY—Fred Haynes et al's E. G. Bounds ranch 1, (H. Jefferies sur), spudding.

HOPKINS COUNTY—Gulf Production Co.'s W. J. Davis 1, (Jas. Clark sur) lcn. The Texas Co.'s M. F. Enix 1, (J. Halle sur) sd for repairs 1250 ft. Texas Unity Oil Co.'s W. N. Williams 1, (Jas. Clair sur) lcn. Bar-Tex Drilling Co.'s C. H. McClure 1, (D. Waggoner sur) dk. S. P. Borden-Allison et al's W. A. Smith 1, (Elizabeth Mitchell sur) dr 2750 ft. Kelsey et al's Addie Brooks 1, (D. Dowdle sur) dr 440 ft.

HUNT COUNTY—Gulf Production Co.'s J. C. George 1, (E. Tidwell sur) lcn. Sam Tulal



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& Kelsey's J. W. Barnett 1, (Alex Smith sur) dk. Harlow Bros. et al's McDaniel 1, sd 925 ft.

KAUFMAN COUNTY—Pure Oil Co. (was Skinner-Lyles & Atlantic's) Barrow Bros. 1, (R. A. Terrell sur) dr 3690 ft. Kelsey & Jackson's Watkins 1, co 2200 ft. Judge Germany et al's W. S. Kirby 1, (S. Edens sur) sd for water 2896 ft.

NAVARRO COUNTY—Alex Patrick & A. G. Ilseng's W. L. Roberts 1, (Jos. Mayor sur) spudding. Webster & Pickens' Guy M. Gibson 1, (F. Fontenoy sur) Austin chalk from 2770 to 3165 ft, sd for cas to test gas at 3670 ft. Boyd Oil Co.'s G. R. McGowan 1, (Morris Webb sur) top Austin chalk 2333 and out at 2717 ft, broken chalk from 2762 to 2807 ft and from 2823 to 2829 ft, cored rich oil sand 3242-46 ft and at 3262 ft, and tested salt water at 3286 ft, sd for cas to drill deeper.

RAINS COUNTY—McLaughlin-Lyles & Atlantic Oil Prod. Co.'s J. T. Dowell 1, (J. W. McMann sur) top chalk 2435 ft, fsh junk 2570 ft. Geo. H. Anderson-Claude T. Morgan et al's T. Welch survey 1, lcn.

RED RIVER COUNTY—Johnson Pet. Co.'s Lady Alice 1, pulled in rig, td 2740 ft.

TITUS COUNTY—Magnolia Pet. Co.'s Geo. Antone 1, (near Talco) moving in materials.

VAN ZANDT COUNTY — Brookins-Jenkins & Sun Oil Co.'s R. P. Hughes 1, (E. Alvarado sur) Austin chalk from 2150 to 2790 ft, taking core 3485 ft. Mills Bennett-Van Zandt Oil & Gas Co.'s J. H. Jones 1, (J. N. Holt sur) sd in chalk 3325 ft. Terrell Oil Co.'s J. T. Dunbar 1, (Van Sickle sur) showed oil in chalk at 2412 ft, sd 2640 ft.

WOOD COUNTY—Golden Oil Co.'s J. D. Adrian 1, (Hallmark sur) sd 1500 ft.

Viking Twin Oil Pumping Units

Figure—15

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Capacity each pump 90 Gallons per minute.

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PIONEER TANK & BOILER COMPANY

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Coastal Wildcats

DRILLING REPORT

ANGELINA COUNTY—Paggi Bros.' Henderson-Hunt 1, about 12 miles east of Lufkin, set cas at 480 ft.

AUSTIN COUNTY—W. W. Johnson and H. R. Carroll's San Felipe De Austin Townsite Outlot 16, dr around 2075 ft.

BRAZORIA COUNTY—Associated Oil Co.'s Perry 1, 2 miles east of Clute, sd at 4351 ft while moving in heavy rig. Sinclair Oil & Gas Co.'s Perry 1, at Stratton Ridge, dr at 180 ft. Quick Dev. Synd.'s Boggs 1, Stratton Ridge, sd at 4350 ft.

CHAMBERS COUNTY—The Kirby Petroleum Co. and Mills-Bennett's Amanda-McKinney 1, southeast side of Barbers Hill, dk. The Texas Co.'s Kirby Pet. Co. 1, 1 mile east of Barbers Hill, dr at 390 ft.

FORT BEND COUNTY — Pathfinder Oil Co.'s Davis Trustee 1, 7 miles northeast of Damon Mound, sd at 1000 ft; 2, sd at 600 ft; 3, dr at 850 ft. Rycade Oil Corp.'s B. Wisdom 1, 7 miles southeast of Damon Mound, bldg dk and moving on rig.

GALVESTON COUNTY—Gulf Prod. Co.'s Geo. E. Smith 1, at High Island, rig up and material being hauled.

GONZALES COUNTY — Bryan & James' Billings 1, southeast corner of the Peter Winn league, near Smiley, preparing to test around 975 ft. Hindman & Mitchell's Morgan 1, 11 miles southwest of Gonzales, dr at 100 ft.

GRIMES COUNTY—L. F. McCausland et al's Dodd 1, 3 miles west of Iola, spudding in.

HARRIS COUNTY — Texas Exploration Co.'s Warren 17, at Hockley, bailing around 1000 ft, td about 3000 ft; Warren 19, dr at 230 ft. The Dome Dev. & Pet. Co.'s Cachere 1, at Piney Point, sd below 700 ft; Schneider 1, rigging up. Trinity Mining & Copper Co.'s Mueschke 1, Wm. Koihn sur, at West Field, sd at 2200 ft.

LIBERTY COUNTY—Gulf Production Co.'s H. C. Gatlin 1, 10 miles from Devers, dr at 1020 ft. Quick Dev. Synd.'s Peeler 3, at Fairchild Hill, sd at 3003 ft.

MATAGORDA COUNTY — Gulf Production Co.'s Caney Cattle Co. 1, near Sargent, rigging up. Rycade Oil Corp.'s Sisk 1, at Markham, rigging up; Meyer 2, rigging up.

SAN JACINTO COUNTY—B. S. Jones et al's Bledsoe 1, 1¼ miles south of Shepard, sd.

WHARTON COUNTY — Gulf Production Co.'s Felder 1, near Boling, dr at 2060 ft.

San Antonio District Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Jim Hogg County—		
Henne-Winch-Farris' No. 1.....	175	1645

DRILLING REPORT

ATASCOSA COUNTY—DeLange-Eiser Co.'s No. 2, Tom, resetting 6-inch casing at 3000 ft.

DUVAL COUNTY—Union Sulphur Co.'s No. 1 Tinney, dr below 600 ft. Mirando Oil Co.'s No. 14, set casing at 1525 ft. Cain & Smith's Schallert 2, lcn. Iowa-Texas-Oklahoma Synd.'s Peters 1, Sur. 789, preparing to r to 2047 ft. Hill-Pierce Corp.'s Martinez Ranch 1, spudded in.

JIM HOGG COUNTY—Miami-Balderas Oil Co.'s No. 1, dr. Diamond S. Oil Co.'s Doering 1, dr. Homer & Tyson's Tyson 2, lcn. Shasta Oil Co.'s Holbein 3, dr below 3100 ft. Carl Mull et al's Sie 1, 230, Pippin lease, sd 1508 ft. J. W. Pippin's No 1, Sur. 51, cored sand at 1810 ft.

LIVE OAK COUNTY — Grubstake Investment Assn.'s J. M. Nichols 3, dr below 100 ft. McCoy's Rose Murray 3, lcn.

McMULLEN COUNTY—San Balt Pet. Co.'s

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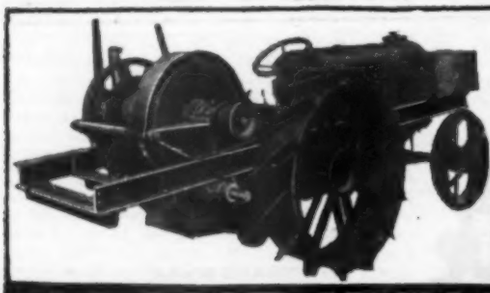

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Stitz 7, dr. Scharbauer & Hoad's Fisher 8, dr below 250 ft. Southern Natural Gas Co.'s Lark 6, blowout at 1000 ft; 9, dk. Coquet et al's Hicks 1, dr. Pioneer Consolidated Pet. Co.'s Martin 1, dr. Kepley, Carl & Anglin's Walsh 1, rigging up. Grubstake Investment Assn.'s Jacobs 3, waiting for water pump; J. T. Calliham 2, dr below 170 ft; 3, cemented casing. Three Rivers Oil Co.'s Calliham 4, dr below 250 ft; 2, dr. George Pickett's Jacob 1, dr below 1100 ft. Allen Oil Co.'s Lark 1, bailing. Watkins-Hill's Lark 1, dr below 1100 ft. M. S. Holliday's Stitz 1, casing cemented. Everett & Adams John Stitz 2, dr below 1480 ft.

ZAPATA COUNTY—H. J. McMullen's Serapio Vela 1, 2 and 3, lcns. Mirando Oil Co.'s No. 14, Sur. 307, dr below 1580 ft. Hill-Pierce Oil Corp.'s Vela Ranch 1, spudded in. Killam Interest's No. 1, Sur. 307, dr below 1493 ft. Hill et al's Haynes ranch 1, dr.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnis & Wards, Watts 1, C NE SW SE 21-27-10w, sd 3010 ft. Armstrong, Henley & Piffles' Turnbull 1, C NW SE NW 23-24-11w, sd 50 ft.

ATOKA COUNTY—McPhearson et al's Wild 1, SWc NW 7-2-9, sd 4105 ft. Henson et al's Dabney 1, C SE NW 17-4-11, sd 1154 ft. J. F. Torrence et al's Fee 1, SWc NE 1-2-9, sd 1350 ft. Wapanucka Dev. Co.'s Underwood 1, C W L SE SE 28-2-9, sd 1700 ft.

BECKHAM COUNTY—Lewis & Co.'s Burkhalter 1, C NE NW 6-9-24w, sd 2750 ft.

BLAINE COUNTY—Thompson et al's Dickerman 1, C SE SE SE 26-15-12w, sd 3213 ft. Myers et al's Chronister 1, SEc NW NE 7-18-16w, sd 965 ft. Okomo Drilling Co.'s Edelmeyer 1, SWc 21-15-10w, dr 2580 ft.

BRYAN COUNTY—Lyons et al's Coombs 1, SEc SW NW NE 11-8-9, sd 400 ft. Alexander's Hampton 1, SEc NE 26-7-11, sd 500 ft.

CANADIAN COUNTY—Ponca Oil & Gas Co.'s Dawson 1, NEc 34-13-9w, sd 2640 ft. Carroll et al's Setter 1, SEc 2-13-8w, dr 150 ft.

CLEVELAND COUNTY—Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft. Furman Oil Co.'s Hager 1, NEc NW 23-10-1e, rig.

CUSTER COUNTY—Hoover Oil Co.'s No. 1, NWc SE 34-13-14, sd 2510 ft.

COAL COUNTY—Basie Oil Co.'s Heck 1, SEc 18-2-9, rig. Bearman et al's Payte 1, SWc NW NE 32-2-9, sd 2780 ft. Guy Vaughn's Nichols 1, SWc 1-1-11, rig.

GRANT COUNTY—Embry et al's Edwards 1, C SE SE NW 20-26-4w, sd 1000 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2300 ft. Phillips Pet. Co.'s Ridings 1, NEc SE NW 29-29-4w, dr 2900 ft. Frank Travis et al's Fuss 1, SWc NW NW 30-27-4w, sd 700 ft.

GREER COUNTY—Neal et al's Johnson 1, SEc NE NW 3-7-22w, dr 1108 ft. Boso & Terrill's Van Vector 1, C SW SW 4-3-22w, lcn.

HUGHES COUNTY—Flescher Pet. Co.'s Smith 1, NWc NE NW 8-9-12, sd 3530 ft. W. J. Thurber's Foster 1, SEc SW SE 5-7-8, pb to 1808 ft. Middle States Oil Co.'s Arn 1, NWc 13-6-11, sd 3585 ft. Kingwood Oil Co.'s Hawkins 1, SEc NE 12-7-9, dr 3215 ft.

JACKSON COUNTY—J. D. Wade's No. 1, C SW NW 36-2-23w, set 6-inch 2810 ft. J R. Abernathy's Snodgrass 1, C NW NW 15-1-23w, dr 150 ft.

JEFFERSON COUNTY—Shawver et al's Anderson 1, SEc NE 31-4-8w, sd 1200 ft. Landis et al's Standfield 1, SEc 33-7-6w, sd 1150 ft. Roy Johnson's Mullen 1, NEc NW 9-4-4w, timbers. Tarkington & Kelsey's Cowden 1, C NW NE 21-5-6w, sd 15 ft.

JOHNSON COUNTY—United 8 Oil Co.'s Holden 1, NWc SW NW 36-5-6, dr 2260 ft. Hanes Oil Co.'s Thompson 1, NWc SE SE SE 6-5-8, sd 850 ft.

KAY COUNTY—Otstot Dev. Co.'s Rohos 2, C NE NE SE 3-27-1, pb to 3440 ft. Alcorn Oil Co.'s North 1, NEc NW NE 12-26-2w, dr 2065 ft. T. B. Slick's Chism 1, SEc NW 32-29-2, dr 3875 ft. Day Oil Co.'s Vandatta 1, SWc NW 8-26-2w, dr 2160 ft.

KIOWA COUNTY—Connor et al's No. 2,

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NEc NW NW 34-7-16, sd 1548 ft. Aubyme Oil Co.'s No. 1, SWc NE 3-7-17w, dr 85 ft.

LINCOLN COUNTY—Sun Ray Oil Co.'s Gallagher 1, C N L SE SE 18-13-5, dr 3275 ft. Flynn & Morgan's Baker 1, SEc 2-14-5, dr 4040 ft. P. & R. Corp.'s Hainzig 1, SWc NW SW 14-13-6, dr 1750 ft. Douglas Oil Co.'s Ewing 1, NWc 7-13-3, dr 2100 ft. J. C. Cook's Richardson 1, SWc NE SW 8-12-5, r 940 ft. Eugene Costa et al's Dodrill 1, SEc NW 26-12-2, dr 1310 ft.

LOGAN COUNTY—Buford-Brim Oil Co.'s Newman 1, NWc NE 32-19-3w, dr 2345 ft. Okla. Drilling Co.'s Johnson 1, SEc SW 36-15-?w, sd 1716 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 28-18-4w, dr 1600 ft. McMunn & Nixon's Fields 1, SWc NE SE 35-17-4w, sd. Haley & Pioneer Pet. Co.'s Quier 1, SWc SE 33-18-3w, rig rebuilt. Leright et al's Lair 1, C S L N½ SE 28-16-1w, sd 750 ft. Gilliland Oil Co.'s Ohm 1, C NW 5-19-2w, spd. Magnolia Pet. Co.'s Pritchard 1, NWc 23-15-1e, dr 860 ft.

LOVE COUNTY—Wickenheiser et al's Beal 1, NEc SE 13-5-3, dr 2835 ft. Drillers Syndicate Oil Co.'s Wilson 1, NWc NE 11-7-2, sd 2830 ft.

MARSHALL COUNTY—Magnolia Pet. Co.'s Everett 1, C NE NE SE 36-7-5. Winters et al's Purday 1, SWc NE SE NE 18-6-7.

MAJOR COUNTY—Texas Prod. Oil Co.'s Basin 1, SWc 36-22-14w, rig. Bradstreet Oil Co.'s Ratcliffe 1, C SW 9-22-9w, dr 2630 ft. Frantz & Slick's Gray 1, C NW 36-21-11w, dr 665 ft.

OKLAHOMA COUNTY—Firestone Oil Co.'s School 1, NWc SE 36-11-3, dr 3560 ft. Big Three Oil Co.'s Wild 1, SWc NE 31-11-2, sd 1390 ft.

PONTOTOC COUNTY — Harper et al's Dener 1, NWc SE SE 19-5-7, set 8-inch 2100 ft. Smith et al's Norris 1, SWc SE 34-4-6, fsh 2430 ft. Riverside Oil Co.'s McFarland 1, NWc NE NW 4-5-5, r 650 ft. Roy Carter's Burk 2, NEc SE SE 32-5-5, sd 2960 ft. C. J. Wrightsman's Floyd 1, SWc NW NE 24-4-4, r 1110 ft. Craig et al's Starritt 1, NWc NE 5-4-5, sd 600 ft. Hughes et al's Falkner 1, C SW NE 2-4-7, dr 915 ft. Galloway et al's Hays 1, NEc SE NW SW 15-3-6, rig.

POTTAWATOMIE COUNTY — Ossie Oil Co.'s Howell 1, SWc NE 13-10-2, dr 2610 ft. Magnolia Pet. Co.'s Brandenberg 1, C SE SW NW 18-7-5, pb to 3590 ft. Davie Detrick's McGahey 1, SEc 10-6-2, dr 3410 ft. H. G. Guinnup et al's Floyd 1, SWc SE 13-11-3, r 3560 ft. North American Oil Co.'s Madgett 1, NWc 25-10-4, dr 460 ft. Maud Oil Products Co.'s Yinson 1, NEc NW 18-7-5, sd 2930 ft. McMan Oil Co.'s Neghan 1, SWc NW 12-7-4, sd 100 ft. Day Oil Co.'s Bell 1, SEc NW NE 2-5-3, sd 3501 ft. Halmond Osmond et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft.

ROGER MILLS COUNTY—Twin Hills Oil Co.'s McClure 1, NWc 15-15-26w, dr 2550 ft. Colorado Oil Co.'s No. 1, C NE NE NE 32-16-22w, crooked hole 2376 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, sd 3036 ft.

SEMINOLE COUNTY — Maxwell et al's Charty 1, C NE NW 33-6-6, dr 1560 ft. Link Oil Co.'s Carolina 1, C SE NW 14-6-7, fsh 2330 ft. T. B. Slick's Sanny 1, SWc 19-6-7, dr 2930 ft.

TILLMAN COUNTY—A. L. Spear's Couch 1, NWc NE SW 10-4-18w, sd 1590 rt.

WASHITA COUNTY — R. B. Hartman's Montgomery 1, NEc SW SE 32-9-17w, sd 3060 ft. McCoy et al's Pretters 1, C SW SW NE 9-8-15w, dr 3035 ft. Sun Ray Aubyme Oil Co.'s Rice, 1, SEc 33-8-18w, dr 125 ft.

WOODS COUNTY—Victor Oil Co.'s Van Buskirk 1, SWc SE 10-25-15w, sd 960 ft.

Kansas Wildcats

BARBER COUNTY—R. B. Brown's No. 1, NWc SW NE 33-30-14w, fsh 3620 ft; Elsa 1, SWc 27-32-14w, rig.

BARTON COUNTY — Cheyenne Oil Co.'s Sooy 1, SWc SW 27-18-12w, sd 3526 ft. Haynes et al's No. 1, NWc 31-18-12w, sd 1220 ft. H. W. Nieswanger's Wriker 1, SW SE 2-19-12w, sd to abn at 1103 ft. Mountain States O. & G. Co.'s No. 1, SEc NE 22-18-13w, dr 3015 ft. Jasper & Becahka's Schauf 1, SEc NW 11-16-12w, dr 860 ft. Huffine et al's Smith 1, C NE SE NE 17-19-11w, run 10-inch at 1615 ft. Streeter & Stearns' Brown 1, NEc SW 21-19-12w, fsh 2400 ft.

COFFEE COUNTY — Sunbeam Pet. Co.'s Andrews 1, NWc NE 33-20-15, rig. Thad O'Day's Allen 1, NWc SE 13-21-15, sd 900 ft.

CLARK COUNTY—Watchorn Oil & Gas Co.'s Morrison 1, SEc NE NE 20-32-21w, dr 3860 ft.

COVE COUNTY—Keys Bros. & Marine's Unknown 1, NWc SE 2-11-26w, lcn; Unknown 1, NWc SW 23-13-26w, lcn.

CLOUD COUNTY—Livingston et al's Murdock 1, NEc 7-6-4w, sd 365 ft.

ELLIS COUNTY—J. Alan Harvey's Polifka 1, SEc NW NE 18-13-17w, dr 1015 ft.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-30, sd 2890 ft.

GEARY COUNTY—Liberty-Texas Oil Co.'s Wright 1, NEc 9-12-6, sd 750 ft; Foster 1, NEc SW 30-13-6, sd 2000 ft.

HARPER COUNTY—D. P. Fleeger's Nettingham 1, SWc 14-33-9w, dr 1930 ft.

JEFFERSON COUNTY — Northern Counties' Edwards 1, SEc NW NW 13-9-19, fsh 3400 ft.

KINGMAN COUNTY—Hale et al's Garner 1, SWc NW 34-27-7, sd 2543 ft.

LINCOLN COUNTY — Trees Oil Co.'s Kohler 1, SEc 36-11-10w, dr 2780 ft. Turman Oil Co.'s Dohl 1, SEc NW 25-12-10w, sd 2665 ft. Berry & Rosenthal's Lambert 1, C NW 31-12-10w, rig. Amerada Pet. Co.'s Crawford 1, NE SW SE 16-11-7w, r 630 ft.

NEMAHA COUNTY—Nemaha O. & G. Co.'s Meyers 1, NWc 19-3-11, sd 3250 ft.

MITCHELL COUNTY — Alcorn Oil Co.'s Beeler 1, NEc 10-9-8w, fsh 430 ft.

OSBORNE COUNTY—Liggett et al's Worley 1, NWc NW 34-10-15w, dr 3182 ft. Delhi Oil Co.'s Forman 1, SWc SW 30-10-11w, r 3250 ft.

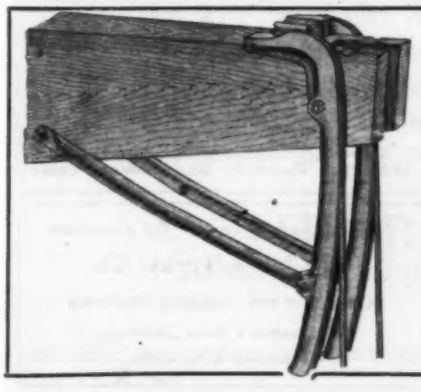
OSAGE COUNTY — Rodgers & Bittle's Bertha 1, SEc NW 22-17-16, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Moyer et al's Williams 1, NEc SW NW 12-18-14, rig. Shade-Smith & Page's No. 1, SEc SW SW 16-18-17, sd 1600 ft.

POTTAWOTOMIE COUNTY — Crawford et al's Stewart 1, C E L SE SE SE 17-9-12, rig; Greischabert 1, SWc SE SE SW 31-9-12, rig; St. Mary's 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—H. T. Proctor's Taylor 1, NWc 15-21-10w, spd and sd. Rino Oil Co.'s Dees 1, SEc SW NW 34-19-6w, dr 3000 ft. Emerson Casey's Bush 1, NEc 7-20-16w, dr 3140 ft. Stamey et al's Barnes 1, SEc NE 21-20-6w, dr 480 ft.

RILEY COUNTY—Richie et al's Boyle 1, SEc 36-7-4, sd 2601 ft. Walton Oil Co.'s No. 1, NWc 20-10-12, sd 1600 ft. Pawnee Oil Co.'s Marks 1, SWc NE NW 26-10-6, sd 1700 ft.

RUSSELL COUNTY—Valerius O. & G.



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Co.'s Phillips 1, SWc 3-12-13w, sd 3274 ft. Merriam et al's Murphy 1, C SW 11-12-12w, dr 2380 ft. P. & R. Corp.'s Haise 1, NWc SE 24-12-15w, dr 2490 ft. Patton et al's Walbridge 1, SWc NE 4-13-13w, dr 1550 ft. Merriam & Findeiss & Sutter's Milke 1, SWc SE SW 20-12-15w, run 6-inch to 2610 ft. White Eagle Oil & R. Co.'s Dodge 1, SEc SW 29-11-15w, parted 8-inch at 3530 ft. Pomeroy et al's Cooper 1, SEc 33-12-11w, sd 400 ft. C. E. Suppes et al's Miller 1, SWc 25-12-12w, lcn. Alcorn Oil Co.'s Seller 1, SEc 36-15-13w, dr 640 ft. J. Garfield Buel's Diessroth 1, SEc NE SW 1-14-11w, sd 330 ft.

SEWARD COUNTY — C. T. Dev. Co.'s Woods 1, NWc SE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Sealey 1, NEc NW 20-33-33, sd 2427 ft.

SUMNER COUNTY—Champlin Ref. Co.'s Haskett 1, SEc 34-10-1w, set 6-inch 3200 ft.

TREGO COUNTY—Merton et al's Kyser 1, C E½ 9-11-22w, sd 1406 ft. Keyes Pet. Co.'s Walsh 1, NWc SE 5-11-25w, sd 1700 ft; Walsh 2, SWc NE SW 5-11-25w, sd 1550 ft. Keyes Bros. & Marine's Davis 1, NEc SW 16-11-24w, dr 1580 ft.

WASHINGTON COUNTY—Barnes O. & G. Co.'s Wickham 1, SEc SW 9-5-5, sd 1305 ft.

WOODSON COUNTY — Equity Oil Co.'s Soloman 1, SWc NE NW 30-26-17, fsh 3210 ft.

Arkansas Wildcats

COMPLETION

Company, Well, Location—	Initial Production Bbls.	Depth
Columbia County—		
Neibert et al's Barge 1, 22-18-22....	*	2650

DRILLING REPORT

CALHOUN COUNTY—Arkansas Fuel Oil Co.'s Childress 2, 1-15-15, dr 150 ft.

CLEVELAND COUNTY — Markle Synd.'s Plummer 1, 22-9-10, sw 2260 ft.

COLUMBIA COUNTY—Ark-Oil Co.'s Fullenwilder 1, 12-17-22, sd 2380 ft. Brown et al's Robinson 1, 23-18-23, sd 3034 ft. DeSoto & Hickman's Fullenwilder 1, 3-16-21, sd 1090 ft. Houston Oil Co.'s Baker-Joiner 1, 2-18-22, sd 1805 ft. Johnson et al's Sailles 1, 18-17-22, sd 740 ft. Kemp et al's Emerson 1, 7-19-19, sd 630 ft. Miller et al's Watts 1, 20-16-18, sd 1990 ft.

DALLAS COUNTY—Conway et al's Riggs-Matlock 1 33-8-15, sd 1805 ft.

DREW COUNTY—Graves et al's Karnes 1, 20-14-6, milling 2170 ft. King & Wilson's Trotter 1, 12-13-6, sd 900 ft. Ratcliff et al's Spencer 1, 21-14-7, dr 1350 ft. Rhodes et al's Harris 1, 5-13-8, sd 1550 ft. Spooner et al's Meyer 1, 4-16-17, sd 50 ft.

GRANT COUNTY—Arnold & Hill's Milk 1, 8-4-17, dk timbers.

HEMPSTEAD COUNTY—Dudney et al's Spates 1, 19-12-27, sd 2000 ft. Hope Columbus Oil Co.'s King 2, 24-11-26, to pull cas and packer, 2156 ft. Martin et al's Adams 1, 36-12-27, dr 2700 ft. Meyer et al's Nicholl's 1, 17-11-25, sd 1860 ft.

HOT SPRINGS COUNTY—Smith Refining Co.'s Kilpatrick 1, 10-6-18, dr 460 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River Lumber 2, 3-20-24, dk.

LITTLE RIVER COUNTY—Gaines et al's Thomas 1, 16-13-29, dr 2715 ft. Grote et al's Allen 1, 2-13-29, dr 2750 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1350 ft. Red River Valley Oil Co.'s Taylor 1, 29-13-29, sd 2790 ft. Sullivan O. & G. Co.'s Ludlow 2, 32-11-32, sd 2600 ft.

MILLER COUNTY—Kress et al's Thompson 1, 33-14-28, sd 917 ft.

NEVADA COUNTY—Anderson & Edwards' Eaves 1, 11-13-23, to set 8-inch 1050 ft. Dudley et al's Grayson-McLeod 1, 32-11-21, sd 1830 ft. Miller-Burnham-Hawley Synd.'s Perry

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1, 12-15-22, dr 865 ft. Prescott Oil Co.'s Henry 3, 10-12-20, sd 1000 ft.

OUACHITA COUNTY—Dee et al's Climer 1, 22-15-19, dk.

UNION COUNTY—Berry et al's Union Saw Mill 1, 14-19-11. sd 875 ft. Bondurant et al's Turbeville 1, 9-18-12, sd 2150 ft. Harrell Trust's Teele 1, 11-19-12, sw 2662 ft. Humble O. & R. Co.'s (Walber) Cordell 1, 1-18-14, to deepen. Jeter Trust's Burnside 1, 33-17-13, sd 3055 ft. Lemond et al's Terrel 1, 22-18-14, dk. Ray et al's Long 1, 22-16-14, sd 2171 ft. Starke et al's Little 1, 21-19-12, sd 2332 ft. Traffic Oil Co.'s Goodwin 1, 20-16-14, sd 3026 ft.

Louisiana Wildcats

COMPLETIONS

Company, Well, Location—	Initial Production Bbls.	Depth
Bossier Parish—		
Estes et al's Bodcau Lmbr. Co. 1, 15-23-12	60	2721
Standard Drilling Synd.'s Johnson 1, 18-18-11	*	1040
Claiborne Parish—		
Collins & Woodley's Reynolds 1, 30-21-4	*	2901

DRILLING REPORT

BOSSIER PARISH—Armistead et al's Bernstein 1, 11-20-13, sd 1180 ft. Atlantic Oil Production Co.'s Bodcau Lbr. 1, 24-23-12, coring sand 2704 ft. Collins et al's Hamilton 1, 16-20-11, dr 725 ft. Skannal et al's Smith 1, 24-17-12, dr 2460 ft. Standard Oil Co.'s McCloud 1, 13-19-11, dr 2205 ft.

CADDO PARISH—Adams et al's Johnson 1, 16-14-16, dk. Ark-Caddo Oil Co.'s Nickerson 1, 30-19-15, set 6-inch 2310 ft. Brewer & Sewell's Sharp 1, 10-18-16, dk. Caddo-Western Gas Co.'s Gardner-Blades 1, 2-16-15, set 6-inch 2668 ft. Collins et al's Levy 1, 23-19-14, to deepen, 980 ft. Crude Oil Co.'s Ledbetter 1, 24-16-14, set 4½-inch 3550 ft. Louisiana-Texas Community Oil Co.'s McCoy 1, 16-23-16, dr 2715 ft.

CALDWELL PARISH—Culver et al's Culver 1, 21-14-4e. coring 2205 ft.

CLAIBORNE PARISH—Arnet et al's Calhoun 1, 25-21-6, fsh 1460 ft. Black O. & G. Co.'s Aubrey 1, 20-21-8, resumed operations, found show of oil and gas, and shut down at once; corrected depth 1450 ft. Dixie Oil Co.'s Easter 1, 20-20-7, dr 960 ft. El Dorado Chief Oil & Gas Co.'s Gandy 1, 36-22-7, dr 2755 ft. Forrest Oil Co.'s Fields 1, 22-19-5, dr 1715 ft. Standard Oil Co.'s Lloyd 1, 10-20-5w, dr 2235 ft. Triangle Drlg. Co.'s Ferguson 1, 5-21-5, coring 2070 ft.

DE SOTO PARISH—Tarver et al's Mathews 3, 32-12-16, rig. Ulrey et al's Frost-Johnson 1, 3-11-15, r 2761 ft.

GRANT PARISH—Grant Parish Pet. Co.'s Ball 1, 1-7-1w, dr 1135 ft.

LA SALLE PARISH—Bur-Ban Oil Co.'s Urania 2, 21-11-2e, dr 410 ft. Stovall Drlg. Co.'s Louisiana-Central Lumber 2, 27-10-2e, dr 1200 ft.

LINCOLN PARISH—Buckner et al's Barrett 1, 13-20-3w, dr 1045 ft. McCauldin et al's Hudspeth 1, 28-20-4, dr 1375 ft.

OUACHITA PARISH—Haynes O. & G. Co.'s Dixie 2, 17-17-3e, fsh 2850 ft.

RED RIVER PARISH—LeGrande et al's Fee 3, 2-14-12, to deepen, 1729 ft.

UNION PARISH — Bob Allison's Frost-Johnson 1, 15-23-1w, set 10-inch 121 ft. Cargile et al's Heard 1, 25-21-3w, sd 2075 ft. Costello et al's Nelson 1, 17-23-1w, dk tmbrs. Davidson & Palmer's Frost-Johnson A-1, 17-23-1e, sd 77 ft; Templeton 1, 18-23-1e, bldg dk. Gulf Refg. Co.'s Security Trust 2, 24-23-1w, setting liner to test 4 ft sand 2192 ft. Johnson et al's Pryor 1, 35-22-2w, to set 8-inch 1385 ft. Love & Clark's Frost-Johnson 1, 7-23-1e, sw and oil 2263 ft. Neddo Petroleum Investment Corp.'s Smith 2, 2-23-3w, sw and gas, 3490 ft. Palmer et al's Frost-Johnson 1, 18-23-1e, rig.

WEBSTER PARISH—Morefield & Tanner's Pine Woods 2, 2-22-11, dk. Olmstead et al's Hudson 1, 17-19-10, sd 800 ft. Smitherman & McDonald's Boucher 1, 21-23-11, plugged back to 2703 ft. Stack & Egger's Bible 1, 8-20-9, sd 1938 ft.

WEST CARROLL PARISH—Arkansas Fuel Oil Co.'s Fiske 1, 8-21-10e, dr 1000 ft. Orion Oil Co.'s Bain Wagon 1, 23-23-10e, set 8-inch 2884 ft.

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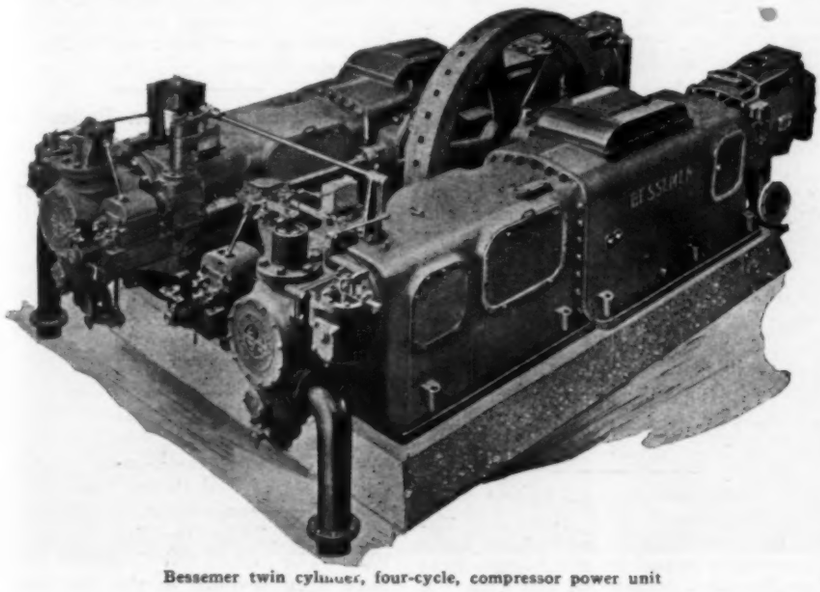

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The Bessemer Gas Engine Company, Grove City, Pennsylvania, announces a new power unit, said to be characterized by its low fuel consumption and the resulting low operating cost.

The engine is twin cylinder, four-cycle with cylinders side by side and a single fly-wheel between. These units are rigidly tied together and held in perfect alignment by distance pieces.

Two parts make up the main frame: the crank case and the crosshead guide. the crank case member carries the main bearing, which is of the side crank type, and the compressor crosshead guide. The left hand crank case also carries the gear box from which the layshaft is operated. The top of each crank case is fitted with a ventilated hood.

The crosshead guide member besides carrying the main crosshead guide, also serves to support the cylinder liner which it encloses, forming the cylinder jacket. Both members of the frame are securely bolted together and doweled, while both are provided with foundation bolt lugs as well as bosses for leveling screws. The sides of both castings are equipped with flanges to prevent oil running on the foundation, while all openings are enclosed with sliding covers to insure safety and cleanliness.

Cylinders consist of liners pressed into bored-out supports in the crosshead guide castings, each liner being held in place by the cylinder head. Large openings are provided in each side of the cylinder jacket for cleaning out any scale or mud that may accumulate.

Ignition equipment consists of two oscillating high tension magnetos operated from the ends of the layshafts. Each magneto may be advanced or retarded so that the spark may be set to occur at the most advantageous place for either starting or running.

Each power cylinder is lubricated in three places. The oil is supplied from a force feed pump which may be timed to deliver oil at the proper point in the piston stroke. The main bearings, crank pin, crosshead pin, crosshead guides and side rod bearings are supplied with oil from a gravity system, each feed of which is controlled by a sight feed valve. The layshaft bearings are equipped with chain oilers, while cams and gears are enclosed and run in baths of oil. All minor pins are fitted with high pressure grease cups.

An automatic ignition cut-out is furnished which will stop the engine if for any cause it should become overspeeded. This consists of a weight in the flywheel which works against a spring. In case of over-speeding, the weight moves out, tripping a device which closes a switch, thereby grounding the ignition.

Further information may be secured by writing The Bessemer Gas Engine Company, Grove City, Pennsylvania.

European Engineering Used In Denison Powermaker

In the Denison Powermaker, a power being marketed by The Cook Motor Company, Delaware, Ohio, engineering features that have proven so successful in European countries have been used.

The power consists of an inverted two cylinder, four cycle, water cooled engine, entirely housed in a sixteen gauge pressed steel casing. The cylinders, bearing standards and base are all included in one casting, which makes the unit very rigid, with permanent and proper alignment of piston, crank shaft and cam shaft. This also lowers the center of gravity over the entire unit.

Adjustments can be quickly and easily made, due to the fact that the crank shaft, cam shaft, magneto, governor assembly and connecting rods are located on top of the main base casting which makes them accessible.

By removing six machine bolts, the valve box, which includes the valves, intake and exhaust manifold and carburetor, can be quickly taken off.

Cooling water from the radiator upon entering the cylinder block strikes the cylinder head, the hottest part of the unit, and raises as it is heated, producing rapid water circulation and uniform cooling. Air is drawn through the radiator, which is mounted at the rear of the main casting, by a fly-wheel Sirocco type fan. The radiator is shrouded, so that dust and dirt going through it with the air do not come in contact with any part of the working mechanism.

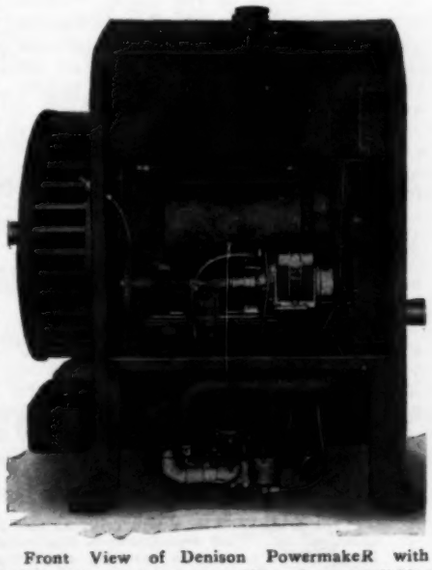
The fuel tank is located at the top of the housing. Access to the working parts and the valve box compartment is effected by removing the front cover, which is a 16 gauge pressed steel piece, and can be locked in place.

The inverted cylinder construction eliminates crank case oil dilution, and enables the engine to be operated on kerosene as well as gasoline.

Power can be taken from the crank shaft at speeds ranging from 500 to 1200 r. p. m., and from the gear reduction shaft at speeds ranging from 250 r. p. m., giving a power range of from 5 to 12 h. p. from either shaft.

Base dimensions of the power are 28¾ inches by 23¾ inches, and the height is 33 inches. The power weighs 550 pounds.

Further information may be secured by writing the Cook Motor Company, Delaware, Ohio.

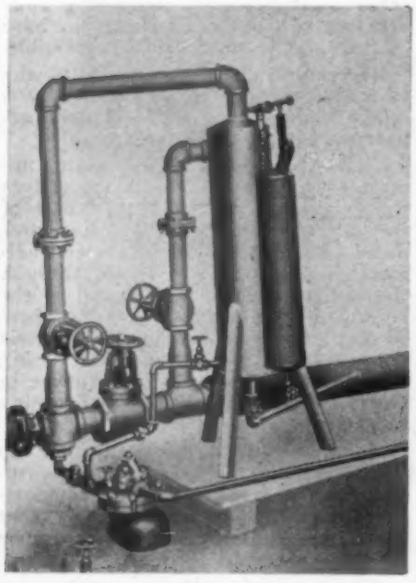


Front View of Denison PowermakeR with Front Cover Removed. Note the accessibility of all working parts

Automatic Lubricator Wins Praise in California

An automatic lubricator for use on cable tool and rotary drilling outfits is being introduced by Masters & Murray, Santa Fe Springs, California. The apparatus is especially adapted for use on rigs where the steam line is from 50 to 1000 feet long.

The device conetrifugally separates



all the water from the steam, trapping the water out of the mains up to the throttle, so that a driller may turn his throttle open as quickly as he wishes, eliminating all water slams and knocking of the engines, preventing the breaking of eccentric straps, valve stems and link motions of engines, and also prevent the knocking out of cylinder heads on slush pumps and engines.

Automatic feeding is a special feature of the lubricator. In other words, if this lubrator is set to feed eight drops of oil per minute while making hole, and for any reason the engine should be stopped, the lubricator continues to feed on, four drops per minute, taking care of the pump. When the pump is shut off, the lubricator quits feeding entirely. This automatic feature is due to the differential of the steam pressure between the inlet nipple and the outlet nipple.

For example, the inlet nipple may carry 125 pounds of steam while the outlet nipple carries 124 founds, with full load on. This will feed at what it is set to feed, eight drops per minute. Then when the engine is shut off, the differential in these two nipples may be only half a pound, which causes the lubricator to feed just half as fast.

When the entire load is shut off, the pressure in the inlet nipple and the outlet nipple carries 124 pounds, with lubricator has no water ahead to feed on, causing it to entirely shut itself off.

Manufacturers of the lubricator claim that savings of from 50 to 65 per cent in lubricating oil have been effected by companies now using the system. The lubricator is being used widely in the Los Angeles district.

Further information may be secured from Masters & Murray, Santa Fe Springs, California.

Booklet on Brass and Bronze

Brass and bronze, products of the Oil City Brass Works, Beaumont, Texas, are featured in a recent booklet published by that company.

The booklet covers the following subjects: Description of the company's standard grades of brass and bronze, list of cored bars and bushings with weights, list of round cast bars with weights, list of hexagon bars with weights, car brasses, code sketches for ordering standard engine brasses, springs, babbitt metal, spring wire, rods, sheets, pipe, tubing, and table of weights, gauges, etc.

Copies may be secured by wrinting the Oil City Brass Works, Beaumont, Texas.

Reid Bulletin on Engines

"Drilling Wells with Reid Gas and Oil Engines" is the title of a new bulletin recently issued by the Joseph Reid Gas Engine Company of Oil City, Pa.

Bulletin No. 28 as it is called, gives briefly the advantages of drilling wells with gas and oil engines, followed by a number of reports of wells drilled by Reid Engines in various oil fields. The book is of interest to every one engaged in cable tool drilling, and the Joseph Reid Gas Engine Company will gladly furnish copies to those interested, upon request.

Bureau Continues Safety Statistics Compilation

Washington, D. C., June 30.—Decision to continue the compilation of statistical data relating to accidents in the petroleum industry in California been made by the Department of the Interior. The work will be done by H. C. Miller and C. E. Steidel of the San Francisco office of the Bureau of Mines. The state industrial accident commission of California is assisting has been made by the Department of the Interior. The work will be done by Mines access to the accident reports received by the commission. A number of the larger oil producing companies in California have decided to compile their accident records along the lines suggested by the Bureau of Mines. The Chanslor-Canfield Midway Oil Company is establishing a safety department and will employ a safety engineer.

Extensive classes in first aid training were recently conducted by the crew of mine rescue car No. 1 of the Bureau of Mines with the oil companies of Signal Hill and nearby points in the Southern California field. Classes were also conducted for the Standard and Union Oil companies at Phoenix, Arizona, and the Union Oil Company at Tucson, Ariz. An extensive itinerary for mine rescue car No. 8 in the oil fields of Kansas and Oklahoma was initiated by the training of classes in first aid at the Sinclair Oil Refinery, Argentine, Kansas. From Argentine, car No. 8 proceeded to Wichita, Kansas, moving from there to Oil Hill and Augusta, Kansas.

Pumping Equipment Bulletin

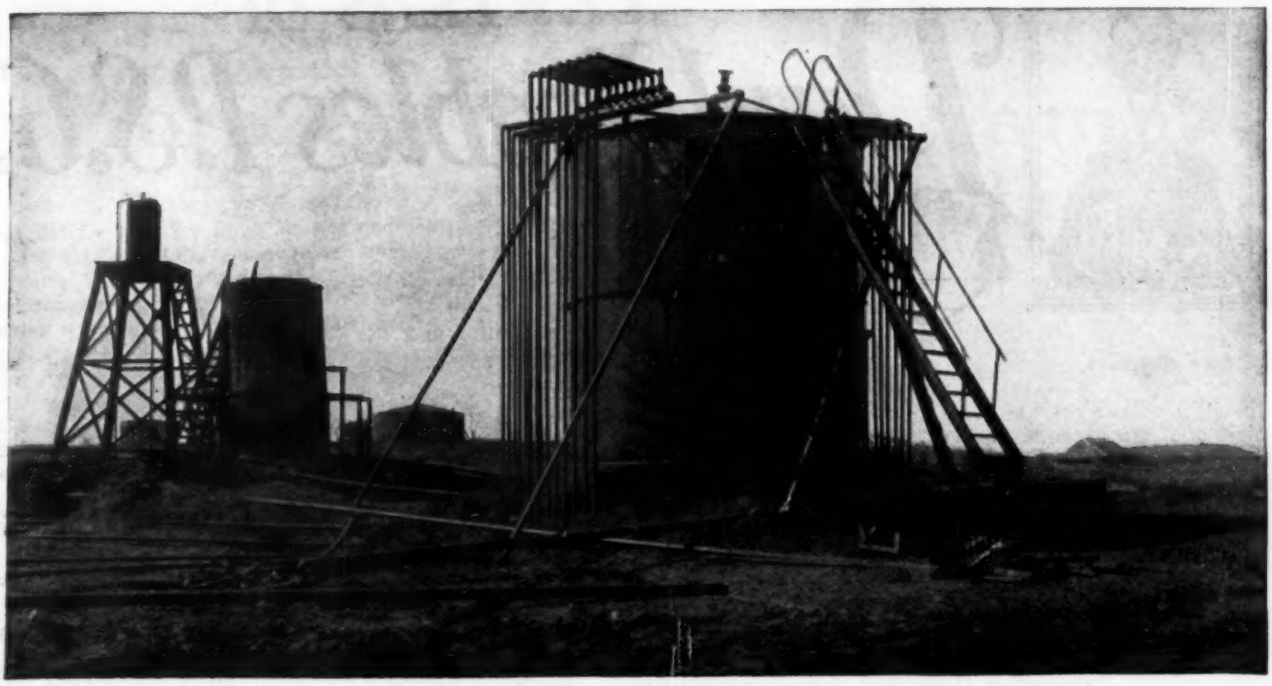
Bulletin No. 23, published by The Alten's Foundry and Machine Works, Lancaster, Ohio, describes and illustrates pumping equipment manufactured by that company. The company has for distribution a set of 14 bulletins devoted to its pumping equipment. Copies can be secured upon application.

Correction Notice

In the Texas Quarterly Summary, published in the June 14 issue of The OIL WEEKLY, the Simms Oil Company was omitted through error from among the ten companies producing the most oil for the first quarter of 1924. The Simms Oil Company should have been seventh in the list with a total production of 765,743 barrels.

F. M. English has recently been appointed assistant sales manager of Reading Iron Company, to succeed A. F. McClintock, whose resignation was announced June 1. Mr. English joined the Reading Iron Company in 1919 and established the Pittsburgh branch for the company. Willingness to apply his knowledge of wrought iron pipe to the buyer's problems, and his untiring effort and well-grounded business judgment gave him a reputation as an authority on pipe problems. His new duties demand a service to buyers of oil country tubular goods, and the experience he has gained in this department has equipped him to assume the responsibilities of his promotion.

The OIL WEEKLY will print on this page data on new oilfield equipment, improvements on old equipment, news of new catalogs, bulletins, etc. This department is handled exclusively by the editorial department and has no connection with the advertising department. Data will be carried on anything which the editorial department thinks of interest to our readers, regardless of whether or not the manufacturer is an advertiser in The OIL WEEKLY.—Publisher.



"carrying two pounds gas pressure"

THE COLINE OIL CO

Ardmore, Oklahoma

April 2, 1924

Service Tank Company

Ardmore, Oklahoma

Attention, Frank McPhail,

Representative of Columbian Steel Tanks

Dear Sir:

The 500 barrel Hi-Pressure Steel Tank recently sold us has proved satisfactory in every respect. We have at this date 36 wells pumping into this tank, making, on the average, 500 barrels of oil going thru same.

We are selling to The Pure Oil Gasoline Plant 360,000 cubic feet of gas daily which is also going thru this tank. In addition, the gas which we are using to drill a deep test well is going thru the above mentioned tank. We are carrying at present two pounds gas pressure on this tank.

Yours truly,

Bert Warner

General Superintendent

Made of 12 guage steel throughout—bottom, sides and deck. Bolted with ½-inch bolts. Trussed deck. More than ample interior reinforcement. Positive pressure and vacuum relief valves. The Columbian is a genuine Vapor Pressure Tank in every detail.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

COLUMBIAN VAPOR PRESSURE TANKS

Truck Tanks
Oil Field Tanks
Bulk Station Tanks
Underground Tanks

Floating Tank Decks
Barrels, Buckets
Carrying Cans, Funnels

Faucets, Valves
Oil and Gasoline Pumps
Plates, Sheets, Angles

Say you saw it in The Oil Weekly

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny I am sorry that I cood not cum down 2 sea yu sundy like I wanted 2 & like I wood, but I had 2 stay hear on account I am especting mabe 2 git a tellygram of important infermashun 2 cum 2 calyfornia. & anuther thing is that the demycrats aint done with their convenshun up 2 new york & I hav not tole yu about it hunny but it has bin insinerated 2 me bi sum of mi moar influentialist frends that it is a possybility that they will need me for a dark horse for the president nomynashun & for a vice president in case they was 2 name a president what does not no nuthin about the oil bizness. Of corse if they pick on macydoo they will not need me, but if they has ennbody elst they will want a good strong man with influents in the oil section & I aint doin no moar than repeetin what has bin sed before when I say that I am the man. If I was on the ticket us demycrates will git a donashun for the campane fund from doheeny, of corse providing mac aint in it, & I espect if he cood make shure that it wood not git out on him in case the republykans was 2 win, even mi ole frend harry sinklare wood kick in for a little for ole time sakes & also 2 be on the safe side if ennything happens.

it is funny we aint hearin verry mutch about harry these daze for sum reeson or anuther. he was not even sued when all the other co's was sued about there refineries like the humble co was, but yu tell yore maw that she does not need 2 be werried about the sute closing up the baytown refinry & makin her lose no borders. tell her 2 remember that the humbel co is still doin bizness sum in spite of the sute whitch they had sum time ago in texas & ennyway I have made a deel with a feller 2 go see them about puttin in the peebls process. in case they needs 2 make a change. I aint never talked about it mutch hunny, but what I no about crackin yu wood be surprized. The only reezen I hav not pushed it is that I don't know how mutch mi sistem is like sum others & I dont want 2 start nuthin until I no where I am at.

but I gess yu R all escited about what I sed about goin 2 californya agin mabe. well it aint nuthing reel serten about it escept a ole frend of mine whitch mabe yu remember me talkin about whitch I noed up 2 destymonia in the old daze is now out to callyfornya & havin sum trubbel lately whitch mabe I can help him out. his name is harry becker & sinct I seen him they tell me he has got in2 polyticks & is the mayer of a town & a cheef trainer or sumtin in a lions den & plays golf & has a oragne patch & everything just like a nativ sun. it shore wood be fun for me & ole harry 2 put on a party 2gether like we uster do wen we cud slip off from the rest of the boys. the girls all called us mutt & jeff on account he aint as long as I am aint either got as mutch hair as I hav got.

but if I go out there hunny it will be on a strickly bizness propersishun on account harry has got sum land down 2 newport beech whitch he aint havin mutch luck gittin drilled & he wants me 2 cum out & geeologize it for him on account he aint got no confridents in no geeologist but me on account he has seen me werkin & noes that I no mi stuff. I aint never brag about it none hunny but it is a hole lot of good oil men whitch has that opinyun in spite of a hole lot oi yung fellers whitch went 2 skule 2 lern this bizness & dont no nuthing about it because they aint got a natchral sourwater taster like I have nor even a good smellin nose like me. bill nose that if I say it is oil on his land it is a safe bet for him 2 go ahed & drill it & besides them peepul whitch is holding back on him will be axshus 2 go ahed & drill it if he can show them a favrable report from me.

so that is the reesen hunny that I cood not cum down 2 sea yu sundy & besides I was thinkin mabe that guy up 2 dalles wood be cumin down hear if yu sent him mi letters whitch I rote 2 yu about them. I gess yu sea now hunny that he is a big windy blow hard or he wood a not stood for the polite cussin whitch I called him in that letter. It was a good thing I was ritin 2 yu insted of 2 him or mabe I wood a used sum langwage whitch wood a burned up the letter before it gotten there. I was jest wishin he wood cum down here so I cood talk 2 him in werds whitch a low brow like him can unddrstand & if he did not wither up & go crawl in a hole sumwheres why then I wood hit him so hard that if I wanted 2 hit him agin before he dide I wood hav 2 ketch him on the bounce. That is just the kinder man I am cleo when I am riled, & it shore does rile me up 2 sea sum pussylannymus low down onnery lyin hiperkrit of a kiote whitch maskerades for a man tryin 2 fool a poor innercent little girl like yu r. Sumtimes hunny I think it is a shame that yu have bin so perteckted from the wiles of this wicked werld that yu are susceptible 2 the soft talk of sutch crimnal kharacters as he is. & then agin I am glad yu r like yu r I love yu for the pretty little innersent thing that yu r, & I am proud 2 deth that I am hear 2 perteck yu & that yu need mi pertecktin arms.

well hunny if I do not hav 2 go 2 californy I will mabe git down 2 sea yu next sundy so save me a date. I say that for a joak, hunny because I no yu r trew 2 me alone & do not hav no dates with nobody esceptin me, yore own trew lover

paul peebles

p. s. harry has also got sum invenshuns whitch he wants me 2 help him with, so i am pretty shure that he will want me 2 cum on out now that I hav sent him werd that I can cum. pp

p. s. agin. wen is yore birthday hunny? will yu be 43 or 45 this time?

pp.

Tret-O-lite

(Reg. U. S. Pat. Otnce)

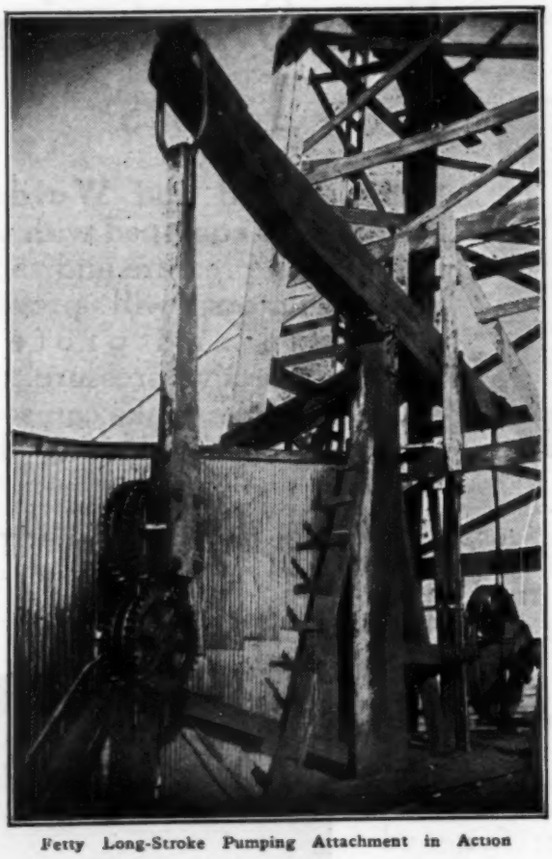
PROCESS PATENTED. The Barnickel processes for treatment of cut oil and other petroleum emulsions by the use of chemical agents are protected by valid process patents issued by the United States and foreign countries.

The purchaser of TRET-O-LITE is licensed to practice the Barnickel processes to the extent permitted by the quantity of TRET-O-LITE purchased. He is not licensed to use any other chemical covered by the Barnickel patents, either alone or with TRET-O-LITE.

WM. S. BARNICKEL & CO.
ST. LOUIS, MO.

More Oil from the Same Well at Less Cost

This Can Be Done With a Fetty Long Stroke Pumping Attachment



Fetty Long-Stroke Pumping Attachment in Action

By installing the Fetty Long-Stroke Pumping Attachment some of the largest companies in the field have increased production from pumping wells and at the same time appreciably reduced operating expenses and brought about a saving in money.

More oil from the same well at less cost. That's added income.

Geared 2 1/9 to 1, the Fetty Attachment will handle more fluid, requires less power to operate, gives an even stroke and reduces rod trouble, in some instances almost entirely eliminating it.

Built to handle a 5-foot stroke with ease, the Fetty Long-Stroke Pumping Attachment is especially recommended to handle wells with 4-inch and 5-inch tubing. Will handle any size tubing.

Now being used by—
Sinclair Oil & Gas Co.
Arkansas Fuel Oil Co.
The Pure Oil Co.
The National Refining Co.
Tri State Oil Co.
Owenwood Oil Corporation.

When properly installed the Fetty Long-Stroke Pumping Attachment is virtually fool-proof.

We solicit inquiries from those interested in increasing production and reducing operating costs.

C. C. FETTY & COMPANY

P. O. Box 1162, Eldorado, Kansas

Say you saw it in The Oil Weekly

PRODUCERS!
SAVE Those DOLLARS!

Stop Evaporation Losses

Butler Bolted and Welded Field Tanks equipped with gas tight decks, pressure and vacuum regulators, will prevent evaporation and protect against excessive pressure. The cost of the tanks can soon be saved by eliminating this waste.

Butler Bolted Tanks furnished in capacities from 65 to 10,000 barrels.

Butler Welded Field Tanks can be furnished in capacities from 40 to 250 barrels. They are ideal for flow tanks.

Butler Gas Tight thief hole hatches are regular equipment on our tanks.

Specially machined and properly weighed to withstand two ounces of pressure whether fastened down or not.

Can be opened by placing one foot on the extended lever which easily raises the cover.

These thief hole hatches can be furnished for tanks you may now have.

We are in position at present to make prompt deliveries and attractive prices. We would like to figure on your requirements.

Write nearest offices for literature and information.

May Tank & Sup. Co.
Casper, Wyoming,
and branches

M-K Tank Co.
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BUTLER MFG. CO.

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MINNEAPOLIS, MINN.

M. & V. Tank Co.
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and branches

Standard Tank & Steel
Works, Ranger, Texas
and branches

Drane-Humphrey Co., Inc.
2015 College Ave.,
Fort Worth, Texas
and Branches

Say you saw it in The Oil Weekly

SQUEAKS from the BULL WHEEL

Edited by J. Kent Ridley

How About It?

Two colored men were standing on the corner discussing family trees.

"Yes suh, man," said Ambrose, "I can trace my relations back to a family tree."

"Chase 'em back to a family tree?" said Mose.

"Naw, man, trace 'em, trace 'em, get me?"

"Well," they ain't but two kinds of things dat live in trees. Birds and monkeys, and you sho' ain't got no feathers on you."—Magnolia Oil News.

Educated, Too

"Those eggs you sent me were very ripe."

"How do you know that?" asked the grocer.

"A little bird told me."

—Judge.

We Should Worry

He was hanging onto his job by a mere eyelash, but he didn't know it. In fact, he thought that he had become virtually indispensable to the firm, and announced to some of his fellow employes that he was going to strike for a raise, and if he didn't get it he was going to leave the firm flat on its back. He made this demand on the boss and came out of the office with a puzzled look on his face.

"Well," one of the boys queried, "did you tell the boss that if you didn't get a raise you were going to quit?"

"Yes."

"What did he say?"

"He said, 'I haven't time to sing it to you, but you'll find the firm's answer in the second line of that grand old song, "Hail, Hail, the Gang's All Here".'"—Magnolia Oil News.

Yep, in a Minute

"Mother, shall I run out and post this letter?" asked a little girl of six years.

"No, child, certainly not," was the reply. "It's pouring in torrents, and not fit to turn a dog out of doors. Let your father go."—Pearson's Weekly.

Middle Aged Woman (leaving car unassisted by husband) —"You are not so gallant as when I was a gal, Henry."

Henry—"You are not so bouyant as when I was a boy, Mary."

"Do you and your wife think the same about things?"

"Some things. When I'm out late she keeps on thinking what she'll say when I get home, and so do I."

Squeaky News—or is it?

Washington, D. C. — Confidential rumors have it that the investigators for the attorney general found that several refiners in different parts of the country are using the same type of pumps that they found in use at Whiting. As soon as the history of the patents on these pumps have been investigated through the patent office it is intimated that an injunction will be secured having them junked. Some significance has also been attached to the circumstance that all refining plants have smoke stacks. This may be an accident but has the appearance of the possibility of collusion in restraint of trade.

Pollyvoo, La. — Senator Fish who was home for the week end announces to his admiring friends that he proposes to introduce a bill to compel all automobiles to be equipped with bags over the exhaust to conserve the gas. He is alarmed over the report he just received that the gasoline engine is not 100 per cent efficient in the consumption of fuel and says that the waste must be stopped. "It is a mistake," the Senator said, "for people to believe that when they buy gasoline that they own it. Gasoline and its exhaust gasses belong to the 'peepul' and the air is a public utility. If the constitution stops us from interfering with the rights of property we can at least say what is done with the air. I say stop wasting exhaust gasses, and if we can't control it otherwise we can stop it through a law against air pollution."

Gimme, S. D. — Consistency McDemmy made a speech here in which he said that because there is an overproduction of wheat the people of the country should eat more bread and the government should buy up the surplus and dump it in the ocean. He also said that the situation in the oil industry warrants the farmers getting gasoline at six cents per gallon, including tax, and advised his hearers to stop using their cars until the price comes down and all the people in the oil business are put in jail for making a profit on what they produce while there is a surplus production.

Thrift a La Femme.

Breen—What has become of that bank account you started to save for a rainy day?

Green—My wife bought a closed car with it.

A Substitute

"What kind of meat have you this morning?" said the haggard husband to the butcher.

"The best steak we have ever had, sir; smooth as velvet and tender as a woman's heart."

"Guess I'll take about two pounds of sausage."

When Fortune Smiled

She—Do you remember that you once proposed to me and I refused you?

He—Yes, that is one of my life's most beautiful memories.

Bridegroom—Yes, every man should marry. Now, what possible excuse have you for being single?

Bachelor—I was born that way.

For Ex-Service Men Only

On the other hand, there is the story of the dusky lady, narrated by Mac in the Rock Island Argus, who went into a drug store and asked for one cent's worth of insect powder. "But that isn't enough to wrap up," objected the drug clerk.

"Man," exclaimed the dark lady, "I ain't asked you to wrap it up. Jes' blow it down my back." —Chicago Evening Post

Eliminate Danger

Pat—They do say the car nixt the injune be the most dangerous.

Mike—Then why don't they lave it off?

The Curse of Rubber

"Ah," she sighed. "I shall never hear his footsteps again; the step I have listened for with eager ears as he came through the garden gate, the step that has so ofen thrilled my heart as I heard it on the front porch. Never, never again!"

"Has he left you?" asked the sympathetic friend.

"No. He has taken to wearing rubber soles."

—Good Hardware.

Mrs. Matthews was learning to drive her new car and was very much thrilled over it.

"Of course," she said, "I could never change a tire myself. Why, I can't even lift one. You know they have eighty pounds of air in them in addition to the weight of the tire!"

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
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General Sales Offices: PITTSBURGH, PA.

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Jacksonville, Fla.
Galveston, Texas

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Southern Engine and Pump Co.

Air Lift Pumping Equipment—
Sullivan Machinery Co.

Attorneys—
Hirsch & Hannay
Vinson, Elkins & Wood

Balls and Seats—
Bradford Motor Works
Continental Supply Company
The Chas. N. Hough Mfg. Co.

Band Wheels—
Continental Supply Company
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Banks—
Commercial National Bank

Belting—
Bridgeport Machinery Company
Continental Supply Company
D. F. Connolly Agency
Frick-Reid Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Stanley Belting Corp.
Voorhees Rubber Co.

Boilers—
Bridgeport Machine Co.
The Brownell Co.
D. F. Connolly Agency
Continental Supply Company
Frick-Reid Supply Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Republic Supply Company
Regan Forge & Engineering Co.
Titusville Iron Works Co.
United Iron Works, Inc.
See Oil Field Supplies and Tanks

Blowout Preventer—
Baash-Ross Tool Company
Cameron Iron Works
Continental Supply Company
Regan Forge & Engineering Co.

Burners—
Continental Supply Company
Gaso Pump & Burner Mfg. Co.
Gould Burner Co.
Regan Forge & Engineering Co.

Bull Wheels—
American Steel Rig & Reel Co.
Continental Supply Company
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Calf Wheels—
Continental Supply Company
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Casing—
Continental Supply Company
David L. Schofield
Oil Field Salvage Co.
Regan Forge & Engineering Co.
Republic Supply Company
Superior Tube Co.

Casing Shoes—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Company
Gulf Coast Machine & Supply Co.
The National Supply Cos.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Cement Hardener—
The Sullivan Co.
W-K-M Co.

Chains—
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Compressors—
Butler Mfg. Co.
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Control Heads—
Continental Supply Company
Palmer Specialty Co.
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Core Drills—
Elliott Core Drilling Co.
Spengler Core Drilling Co.

Cordage—
D. F. Connolly Agency
Continental Supply Company
The National Supply Cos.
Republic Supply Company

Crown Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Supply Co.
Continental Supply Company
Gulf Coast Machine & Supply Co.
International Derrick & Equipment Company
Lufkin Foundry & Machine Co.
Oil City Iron Works, Inc.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

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Harrisburg Pipe & Pipe Bending Company
Steel Coupling Co.
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American Cable Co.
Bridgeport Machine Co.
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Frick-Reid Supply Co.
F. W. Heitmann Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Company
Williamsport Wire Rope Co.

Drill Pipe Slips—
Baash-Ross Tool Company
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Drilling Machines—
Bridgeport Machine Co.
Continental Supply Company
Keystone Driller Co.
Parkersburg Rig & Reel Co.
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Drill Collars—
Baash-Ross Tool Company
Continental Supply Company

Drill Pipe Cutting—
Baash-Ross Tool Company

Drilling Tools—
Baash-Ross Tool Company
Continental Supply Company

Drill Pipe—
Continental Supply Company
Frick-Reid Supply Co.
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Drilling Equipment—
American Well & Pros. Co.
Baash-Ross Tool Company
Bridgeport Machine Co.
Continental Supply Company
Republic Supply Company
Western Supply Company

Drive Pipe—
Continental Supply Company
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Electrical Equipment—
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Elevators—
Bridgeport Machine Co.
Continental Supply Company
The Cunningham Company
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Wilson & Willard Mfg Co.

Engines, Diesel—
Western Machinery Co.

Engines, Gas—
Continental Supply Company
The Braden Co.
Frick-Reid Supply Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines, Oil—
Continental Supply Company
Frick-Reid Supply Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
American Well & Pros Co.
Bessemer Gas Engine Co.
Bridgeport Machine Co.
Continental Supply Company
The Brownell Co.
De La Vergne Machine Co.
C. C. Fetty & Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos
National Transit Pump & Machine Company
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Company
Rock Island Plow Co.
Southern Engine & Pump Co
Titusville Iron Works
Western Machinery Company

Engineers—
A. C. Bierman
C. N. Black
Samuel J. Caudill
David Donoghue
C. C. Fetty & Co.
Foster & Reiter
F. W. Freeborn Engineering Co.
E. F. Kuehnle
Geo. C. Matson
Lee C. Moore & Co.
Oil Conservation Engineering Co.
L. H. Owen
D. T. Ring
Southern Blue Print & Supply Co.

Fire Protection—
Continental Supply Company
Oil Conservation Engineering Co.

Fish Tail Bits—
American Well & Pros. Co.
Continental Supply Company
Frick-Reid Supply Co.
Gulf Coast Mach. & Sup. Co.
Lurey Manufacturing Corp.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
W-K-M Co.

Floor Circle Brace—
Continental Supply Company
Dunn Mfg. Co.

Fuel Oil—
Gulf. Ref. Co.
Sinclair Ref. Co.

Gas Traps—
Continental Supply Company
Trumble Gas Trap Co.

Gasoline Extraction Compressors—
Continental Supply Company
Bessemer Gas Engine Co.
Sullivan Machinery Co.

Gasoline and Oil Storage Tanks—
Butler Mfg. Co.
Graver Corporation
Continental Supply Company
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.

Gauges—
Continental Supply Company
The Foxboro Co., Inc.
Oil Conservation Engineering Co.

Gauge Boards—
The Foxboro Co., Inc.

Genuine Wrought Iron Casing—
Reading Iron Co.
Superior Tube Co.

Geologists—
A. C. Bierman
Samuel J. Caudill
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Geo. C. Matson
L. H. Owen
Herald Bros.

Grips and Clamps—
Continental Supply Company
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Borwn Welding & Machine Co.

Hoists—
Alamo Iron Works

Hose—
Continental Supply Company
D. F. Connolly Agency

Houses—
Crain Ready-Cut House Co.

Hydrometers—
The Braun Corp.

Laboratory Equipment—
Continental Supply Company
Fort Worth Laboratories

Lease Equipment—
The Braden Co.

Lighting Systems—
Bridgeport Machine Co.
Continental Supply Company
R-F Electrical Mfg. Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Company
Republic Supply Company
Reading Iron Co.
Superior Tube Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.
Standard Blue Print, Map & Engineering Co.

Meters—
Continental Supply Company
The Foxboro Co., Inc.

Motors—
Westinghouse Elec. & Mfg. Co.

Oil Field Supplies—
American Steel Rig & Reel Co.
American Well & Pros. Co.
The Braden Co.
Bridgeport Machine Co.
Butler Mfg. Co.
Continental Supply Company
D. F. Connolly Agency
The Cunningham Company
C. C. Fetty & Co.
Frick-Reid Supply Co.
Graver Corporation
Gulf Coast Mach. & Sup. Co.
Erle P. Halliburton
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company
Regan Forge & Engineering Co.
Robinson Packer Co.
H. M. Spence
Smith Separator Company
Southern Brass Mfg. & Plating Co.

GUIDE FOR PURCHASERS—Continued

Oil Field Supplies—(Cont.)
Superior Tube Co.
United Iron Works, Inc.
W-K-M Co.
Western Supply Company

Oil Stills—
The Braun Corp.

Oil Thieves—
The Braun Corp.

Oilwell Casing—
Continental Supply Company
Frick-Reid Supply Co.
Republic Supply Company
Superior Tube Co.
Texas Pipe & Supply Co.

Oil Well Cementing—
Erle P. Halliburton

Overshots—
Baash-Ross Tool Co.
Continental Supply Company
LeBus Rotary Tool Works

Packers—
Continental Supply Company
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Western Supply Company
W-K-M Co.
Exner-Dodge Packer Co.

Packing—
Continental Supply Company
D. F. Connolly Agency
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Sup. Co.
Republic Supply Company

Paints—
Continental Supply Company
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Electric & Mfg. Co.

Patents—
Hardway & Cathey
Jesse R. Stone

Pipe Grips—
Continental Supply Co.
W-K-M Co.

Pipe—
A. M. Byers Co.
Continental Supply Company
W. E. Detlor
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co
Reading Iron Co.
Republic Supply Company
David L. Schofield
Superior Tube Co.
Standard Seamless Tube Co.
Williamsport Wire Rope Co.

Pipe Screwing Machines—
California Pipe Line Machine Co.
Buckeye Traction Ditcher Co.

Pipe Wrenches—
Continental Supply Company
Dunn Mfg. Co.
The Guiberson Corp.
LeBus Rotary Tool Works
Republic Supply Company

Plunger Rotor
Sargeant Engineering Co.

Polish Rod Grips—
Sargeant Engineering Co.

Portable Buildings—
Butler Mfg. Co.
International Derrick & Equipment Company

Portable Compressors—
Continental Supply Company
Sullivan Machinery Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Company
Lee C. Moore & Co.
Oil Well Service Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pullers—
Davis & Kuhns

Pulleys—
Continental Supply Company
Davis & Kuhns
International Derrick & Equipment Company
Lee C. Moore & Co.

Pulling Machines—
Clark Machine Co.
Continental Supply Company
Iron King Mfg. Co.
Myrick Machine Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
American Well & Pros. Co.
Bradford Motor Works
Continental Supply Company
D. & B. Pump & Sup. Co.
C. C. Fetty & Co.
Frick-Reid Supply Co.
Gaso Pump & Burner Mfg. Co.
Goulds Manufacturing Co.
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Company
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Pumping Powers—
The Braden Co.
Continental Supply Company
C. C. Fetty & Co.
Frick-Reid Supply Co.
Foster-Hoefer Corp.
Jensen Bros. Mfg. Co.
Kansas City Hay Press Co.
H. M. Spence

Refined Products—
Gulf Refining Company
Humble Oil & Refining Co.
Sinclair Refining Co.
Sunshine State Oil & Ref. Co.

Recorders—
Fort Worth Laboratories
The Foxboro Co., Inc.

Refinery Equipment—
Butler Mfg. Co.
Continental Supply Company
Gardner Governor Co.
Graver Corporation
Kansas City Struct. Steel Co.
Oil Conservation Engineering Co.
Republic Supply Company
Smith Separator Company
Titusville Iron Works
United Iron Works, Inc.
Wyatt Metal & Boiler Works

Rig Building—
Producers Lumber Co.

Rig Irons—
Continental Supply Company
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Company

Rig Timbers—
D. D. Wertzberger

Rotary Rock Bits—
Continental Supply Company
Hughes Tool Co.

Rotary Fish Tail Bits—
Continental Supply Company
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
W-K-M Co.

Screens—
Pacific Oil Tools Co.

Sectional Steel Buildings—
The Braden Co.

Separators—
Butler Mfg. Co.
Continental Supply Company
Smith Separator Company
Trumble Gas Trap Co

Standing Valve Puller—
Sargeant Engineering Co.

Structural Steel—
Butler Mfg. Co.
Kansas City Struct. Steel Co.
Pennsylvania Tank Car Co.
United Iron Works, Inc.

Steel Derricks—
Continental Supply Company
International Derrick & Equipment Company
Lee C. Moore & Co., Inc.
Superior Tube Co.

Steel Crown Blocks—
Continental Supply Company
Gulf Coast Mach. & Sup. Co.
International Derrick & Equipment Company
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Manufacturers—
Colonial Steel Co.

Steel Storage Tanks—
Butler Mfg. Co.
Continental Supply Company
Graver Corporation

Strainers—
Continental Supply Company
Layne & Bowler Co.
Pelican Well Tool & Supply Co.
J. H. McEvoy & Co.
W-K-M Co.

Sucker Rod Lines—
D. F. Connolly Agency
Continental Supply Company

Sucker Rods—
Axelson Machine Co.
Continental Supply Company
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Company

Sucker Rod Sockets—
Bradford Motor Works
Continental Supply Company
Brown Welding & Machine Co.

Swabs—
Continental Supply Company
The Cunningham Company

Tank Bolts—
Continental Supply Company
Steel Mfg. & Warehouse Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
Columbian Steel Tank Co.
Continental Supply Company
The Brownell Co.
Gantz Tank Co.
Graver Corporation
Kansas City Structural Steel Co.
Maloney Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works
Pittsburgh-Des Moines Steel Co.
United Iron Works
Wyatt Metal & Boiler Works

Tank Equipment—
Continental Supply Company
Oil Conservation Engineering Co.

Tank Gauge Engineer—
L. M. Hall

Temper Screws—
Burns Tool Co.

Tret-O-Lite—
W. S. Barnickel & Co.

Thermometers—
Continental Supply Company
Fort Worth Laboratories
The Foxboro Co., Inc.

Tongs—
Bridgeport Machine Co.
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corp.
LeBus Rotary Tool Works
Pelican Well Tool & Supply Co.
Wilson & Willard Mfg. Co.
W-K-M Co.

Tool Joints—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Bridgeport Machine Co
Continental Supply Company
Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Tools (Fishing and Drilling)—
Bridgeport Machine Co.
Brown Welding & Machine Co.
Continental Supply Company
Frick-Reid Supply Co.
Hughes Tool Co.
International Supply Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
Sullivan Machinery Co.
Western Supply Company
W-K-M Co.

Toothless Slips—
LeBus Rotary Tool Works

Tractor Winch—
American Steel Rig & Reel Co.
Rock Island Plow Co.

Traveling Blocks—
American Well & Pros. Co.
Baash-Ross Tool Company
Boykin Machinery & Sup. Co.
Continental Supply Company
Gulf Coast Machine & Sup. Co.
Lufkin Foundry & Machine Co.
Regan Forge & Engineering Co.

Tubing Catcher—
Continental Supply Company
Dunn Mfg. Co.
Guiberson Corp.

Tubing Lines—
Continental Supply Company
D. F. Connolly Agency

Tubing—
Continental Supply Company
Republic Supply Company
Reading Iron Co.
Standard Seamless Tube Co.
Superior Tube Co.

Underreamers—
American Well & Pros. Co.
Bridgeport Machine Co.
Continental Supply Company
Western Supply Company
Wilson & Willard Mfg. Co.

Vacuum Pumps—
Continental Supply Company
Sullivan Machinery Co.

Valves—
Bradford Motor Works
Continental Supply Company
Darling Valve & Mfg. Co
The Charles N. Hough Mfg. Co.
Texas Oil Pump Co
Ludlow Valve Mfg. Co.
Oil Conservation Engineering Co.
Pratt & Cady
Reading Steel Casting Co.
Reading Valve & Fittings Co.
Smith Separator Company
Southern Brass Mfg. & Plating Co.
Westcott Valve Mfg. Co.
W-K-M Co.

Valves and Fittings—
Continental Supply Company
Darling Valve & Mfg. Co.
D & B Pump & Sup. Co.
F. W. Heitmann Co.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pratt & Cady
Republic Supply Company
Reading Steel Casting Co.
Reading Valve & Fittings Co.
United Iron Works
W-K-M Co.

Walking Beams—
Continental Supply Company
Internaitnal Derrick & Equipment Company
Lee C. Moore & Co., Inc.

Welding and Cutting Equipment—
Continental Supply Company
Imperial Brass Mfg. Co.

Working Barrels—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Company
D & B Pump & Sup. Co.
Foster-Hoefer Corp.
Republic Supply Company
The Charles N. Hough Mfg. Co.
Southern Brass Mfg. & Plating Co.
Texas Oil Pump Co.

Water Gauges—
Continental Supply Company
J. E. Shaffer Co.
F. W. Heitmann Co.

Water Cans—
Continental Supply Company
H. P. Gott Mfg. Co.

Wire Line Clamps—
Western Supply Company

Wire Rope—
Bridgeport Machine Co.
D. F. Connolly Agency
Continental Supply Company
Houston Oil Field Material Co.
International Supply Co.
Regan Forge & Engineering Co.
Republic Supply Company
The National Supply Cos.
Williamsport Wire Rope Co.

Signal Hill's Largest & Latest GASOLINE PLANT *under Construction*

(MAY 15, 1924)

TWELVE 160 H. P. "WESTERN" DUPLEX GAS ENGINES WITH "WESTERN" TYPE "S" IDLERS

This is the third Gasoline Compressor Plant, **completely** powered with "Western" Engines, owned by this one company, and—**all their installations are "Western."**

"A single 'Western' Engine has often changed the complete power policy of an entire company."

WESTERN MACHINERY COMPANY

General Offices & Factory—905 N. Main Street

LOS ANGELES, CALIFORNIA

BRANCHES:

Tulsa Oklahoma	Okmulgee Oklahoma	San Francisco California	Bakersfield California

1. General Office. 2. Engineer's Building. 3. Chemical, Metallurgical and Physical Laboratory. 4. Main Machine Shop. 5. Shipping Depot. 6. Heat Treating. 7. Electrical Steel Foundry. 8. Employee's Diningroom. 9. Steel Storage Yard. 10. Employee's Garage. 11. Garage. 12. Receiving Dept. 13. Electrical Distributing Center. 14. Tennis Courts. 15. Spur Tracks. 16. Wash and Locker Rooms.
HUGHES TOOL CO.
HUGHES TOOL CO.
CALIFORNIA BRANCH
LOS ANGELES

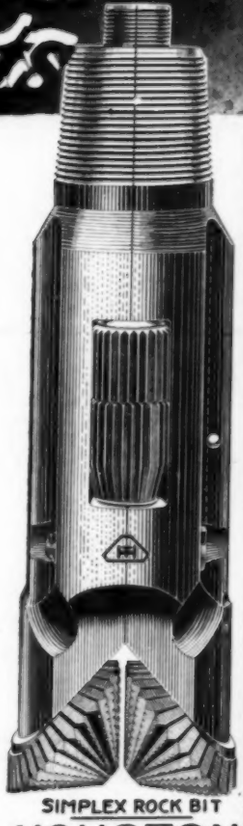
The Hughes Tool Co. Plant & Products

From a very humble beginning in 1909 the Hughes Tool Company has grown to the large manufacturing institution pictured above.

From a local distribution of its Rotary Drilling Tools, the field of service of Hughes products has expanded to include world wide oil field distribution.

The name "Hughes" means Quality and "Dependable Service" to Rotary operators wherever they drill for oil.

Hughes Products are Sold by Supply Stores Everywhere



ACME THREAD TOOL JOINT

SIMPLEX ROCK BIT

California Branch
Los Angeles

HUGHES TOOL CO.

HOUSTON
TEXAS